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GUEST EDITORIAL

The Community Memorial Hospital

"THE truth is apparent. There are too few hospital beds in Richmond at this time and the acuteness of the situation is likely to be increased by the growth of the population and by the extension of Group Hospitalization."[1] These prophetic words were printed on the editorial page of this magazine in January 1941. This is the first public statement I can find on the shortage of hospital beds in Richmond, although the growing need had been discussed by Richmond physicians several years prior to 1940. It appears to me that after a decade of experience in this field, a frank and full discussion is in order.

I am surprised at the few public statements during the early '40's. The situation, as we look back upon it, had grown rapidly worse. In early 1944 I noted a news comment. The occasion was caused by the visit to the city of a prominent syndicated newspaper columnist. He arrived at his hotel early in the morning desperately ill, with immediate hospitalization indicated. A nurse had to be rushed to his hotel room until his physician could discharge a patient in order to make a hospital bed available. The situation aroused the interest of the newspapers.

Late in 1944 the shortage was very acute and a Richmond physician commented on it in the VOICE OF THE PEOPLE and other letters followed. It was at this time that the proposition was made to enlarge the *Retreat for the Sick*.

Early in 1945, as an outgrowth of the acute situation, the Richmond Community Council sponsored a committee to study our hospital needs and make recommendations regarding them. This committee commissioned Dr. Robin C. Buerki of Philadelphia to survey the city's situation. He made a thorough study and in April submitted a 100 page report.[2] In it he praised the work of our private hospitals in the past. He emphasized the fact that the splendid new Medical College of Virginia Hospital was primarily a teaching hospital and should not be diverted from filling the great need as a teaching institution for which end it was founded. He showed us how woefully lacking we were and had been in the past of non-profit beds for private and semi-private cases. He concluded his report by stating that our minimum need could be supplied only by a 500-bed non-profit hospital. He advised that the community make plans immediately to supply this need.

The committee from the Richmond Community Council gave careful study to the report and late in 1945 invited Dr. Buerki to come to Richmond and review his report before a mass meeting of citizens. After his very able presentation, a committee of five was appointed to give the matter further consideration. As a result this steering committee gathered around them a group of some 35 or 40 citizens. This able group, composed of our leading business and professional men and women, organized themselves into a hospital board with an able president and a splendid group of officers. There were no physicians on this Board.

[1] *The Doctor's Dilemma*, Wyndham Blanton, M.D., *Virginia Medical Monthly* **68**: January, 1941.

[2] *Survey of Hospital Facilities in Richmond, Virginia*, Robin G. Buerki, M.D., April, 1945.

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Aside from this effort, during the Spring and Summer of 1946 a group of Richmond physicians began to study the hospital needs of the city along with the Buerki report. This group met together in an unofficial capacity. Their advice was constantly sought by the hospital steering committee and later by the hospital Board. Shortly thereafter, the President of the Richmond Academy of Medicine appointed an Advisory Committee of physicians to act as official advisors for our citizens in their effort to solve this great and growing problem. This Advisory Committee grew from 25 to 50 members. Then this large committee of 50 was divided into about a dozen sub-committees to study the different phases of the hospital question. For example, one group studied the type of building best suited to Richmond's needs; another the location. Other groups worked on staff requirements, the nursing problem, etc.

This group of physicians soon learned that there was a great deal of meat in the Buerki report. The situations described by Dr. Buerki were found to be only too true. By taking a census of the hospitals themselves this Advisory Committee learned that every day in the city of Richmond there were from 300 to 350 on the waiting list desiring hospitalization. The private hospitals were struggling valiantly to meet the needs but they were inadequate to do so. We found to our surprise, during all this hospital bed shortage in Richmond, that the Sheltering Arms Hospital (a unique institution in Richmond in that all of its beds are free) was only about one-third full. The demand was most assuredly for private and semi-private beds. We likewise found the nursing problem a very vexing one. Again the editorial in this magazine offered a very helpful comment.[3]

Early in 1946 another movement started which had profound effect upon the hospital. During the early Fall of 1945, the late William Herbert, then Mayor of Richmond, appointed a committee of citizens whom he requested to make a recommendation for a suitable War Memorial after they had investigated what the people of Richmond really wanted. In January 1946 one of our city physicians proposed in the *Times-Dispatch* VOICE OF THE PEOPLE that a most fitting and appropriate War Memorial would be the proposed Community Hospital. This suggestion received favorable editorial comment from this newspaper. After considering a great many proposals, the Citizens' Committee submitted a questionnaire to the nearest of kin of deceased veterans as to what their preference would be, and 65 per cent of those questioned made reply. Of this group 80 per cent voted for the hospital as the most suitable type of War Memorial for Richmond. During the Spring and Summer of 1946 there were 25 civic and other organizations which went on record approving the proposed hospital. This number was later increased to 40.

On the strength of this mandate from the people, the Citizens' Committee recommended to Mayor Herbert that Richmond wanted a non-profit community hospital as the War Memorial. Shortly after the committee made its report Mayor Herbert died. His successor, Mayor Horace Edwards, accepted the report of the Citizens' Committee and advised that it be submitted to the Common Council for their sanction.

The Board of the hospital was on the point of sending this request to the Council in the Spring of 1947 when a group of young veterans asked to be allowed to poll all veterans of World War II to ascertain their specific wish as to a War Memorial. The hospital Board agreed to this request. The various veterans' groups sent out ballots to all veterans in Richmond and the immediate vicinity. Of the twenty odd thousand

[3] *The Training of the Graduate Nurse*, Drs. Warthen and Williams, *Virginia Medical Monthly* **73**: July, 1946.

ballots sent out 5,000 responded. Of this group the plurality was for the proposed community hospital as Richmond's War Memorial.

After this poll was concluded, the hospital Board made its formal request of the Common Council. The paper was first considered by the Ordinance Committee, then the Common Council, and finally by the Board of Aldermen. It passed all three bodies with only one dissenting vote. On July 22, 1947, Mayor Horace Edwards signed the ordinance making the proposed non-profit community hospital the official memorial to the dead of World War II. A few days later the hospital Board met and named the proposed hospital "The Community Memorial Hospital" and proceeded to secure its charter.

SUMMARY

It would be impossible to condense all that we have learned from this ten year experience in this article, but in order to review the most salient points, we close with this brief summary:

A grave shortage of hospital beds exists in Richmond and we have every reason to believe the shortage exists throughout the state.

Hospital facilities for treating and caring for the sick are in more constant demand. For a number of reasons people are more hospital conscious. Hospital insurance facilitates their hospitalization. The more complex society becomes, the greater the demand. We conclude, therefore, that this present shortage, which has extended practically a decade already, will continue to grow.

Our pressing need is for more private and semi-private beds furnished by a non-profit general hospital with an open staff. The Medical College of Virginia is a teaching hospital and must continue to be used for that specific purpose. The private hospitals which have served so well in the past will be and should be improved. However, neither of these two types, as valuable as they are, can fulfill Richmond's needs.

Another factor worthy of deep concern is the plight of our young physicians who desire to practice here. The private hospital does not have the facilities to accommodate all of its owners, much less to take in those from the outside, even though these men may be exceptionally well trained. The private closed staff may well become a "succession" system rather than a merit system. Our enviable position as a medical center may easily be endangered by such a course. The Medical College of Virginia needs the part time service of many well trained, unaffiliated men as teachers and the proposed hospital will furnish a place for them to practice.

From what we have learned, the underprivileged citizens do not wish to be segregated in a strictly charity hospital. Hospital insurance will solve a part of their problem and an endowment fund would likewise be extremely useful. It certainly appears that people, unable to pay all hospitalization costs, would prefer being helped according to their needs in a non-profit hospital.

From the civic activities since V-J day, there can be no doubt that the desire of this community is for a living memorial to the city's dead of World War II. They have so expressed themselves in selecting the Community Memorial Hospital as their preference. It is designated as "The Municipal World War II Memorial."

The financing, erecting and staffing of such a hospital will be a herculean task and presents many problems. However, one recalls an old Chinese proverb which says "There is no task under Heaven feared by the man who puts his heart in it."

HENRY WALKER DECKER, M.D.

EDITOR'S NOTE: Dr. Decker is chairman of the Hospital Advisory Committee from the Richmond Academy of Medicine and has worked hard and earnestly in the interest of this memorial.

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THE NEED FOR TRAINED MEDICAL ANESTHETISTS IN VIRGINIA*

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I would like to preface my remarks today by stating that the general level of the practice of medicine and surgery in the State of Virginia has always been high and that this has been especially true of most of the specialties within these two large groups. This statement, however, cannot be made with reference to the specialty I wish to discuss today—that of anesthesia, or, as it has been termed more recently, anesthesiology. The question as to why Virginia and, for that matter, the entire South Atlantic Area, has failed to take full advantage of the best that modern anesthesia has to offer is difficult to answer and beyond the scope of this paper. The fact remains that probably ninety per cent of all anesthesias given in Virginia are administered by non-medical personnel.

Several weeks ago a questionnaire was sent to 85 hospitals in the State of Virginia asking if their staff included a physician anesthetist and if this staff member was certified by the American Board of Anesthesiology. Only civilian hospitals were chosen for this survey and neither Veterans Administration nor mental or tuberculosis hospitals were included.

Replies were received from 78 or 92 per cent of the hospitals queried. Assuming that the 7 hospitals which did not reply did not have a physician anesthetist and this assumption appears reasonable in view of the size of these institutions, this survey showed that only 13 physicians are practicing anesthesia in the State. One of this number is certified by the American Board of Anesthesiology. The latter statement is made with a full realization that many who have not taken the Board are superior anesthetists to some who have been certified but this is the only yardstick of proficiency we have at the present time, and it is the standard by which outsiders judge our anesthetists.

This situation is not true generally throughout the United States. In a recent communication from Dr. Paul M. Wood,[1] Secretary of the American Board of Anesthesiology, he stated that while there are only 280 Diplomates of this Board, there are at the present time 2,900 physicians studying or practicing full or part time anesthesiology in this country. This, he states, is a tremendous increase over 5 years ago when there were less than 500 physician anesthetists in the United States. Two thousand nine hundred anesthetists represent about one anesthetist for each 2 approved hospitals in this country.

If we apply the figures furnished by Dr. Wood, we find that Virginia with one-fiftieth of the hospitals and physicians in the United States has one-two hundred and eightieth of the Board members and one-two hundred and twentieth of the medical anesthetists in the country. These figures are, of course, rough approximations, but they indicate that we have less than one-fourth of our share of medical anesthetists.

Virginia is not alone in this respect, for the 1946 Geographical Director of the American Board of Anesthesiology shows only one Diplomate of the Board in the states of Maryland and North Carolina. None of the South Atlantic States shows up well in comparison with Massachusetts which has 18, or Connecticut with 10 members.

The question may be asked—granted the above is true—to what extent and in what degree is the well trained medical anesthetist superior to the well trained technician anesthetist?

In the first place, virtually all of the advances that have been made in anesthesia have been the result of original contributions by physicians. During the first seventy-five years after the introduction of anesthesia few physicians were interested in this specialty. It was considered only a means to an end and the rapid strides that were being made in the broadening field of surgery diverted attention from this important subject. The anesthesias were given by a physician who chanced to be available or by a nurse who frequently was assigned this duty along with other functions in the operating room. In some instances an orderly served as anesthetist. Needless to say, the standard was low and in all probability the safest anesthesias were given by nurses. This state of affairs continued until about 1920. It is significant that ether, nitrous oxide and chloroform

*Read before the annual meeting of the Medical Society of Virginia, at Virginia Beach, October 14-16, 1946.

continued to be used in much the same manner as when they were introduced three-quarters of a century before. Little had been added to our knowledge concerning these drugs and, with the exception of the various local anesthetics, no new agent had been discovered.

About twenty-five years ago a change occurred. Physicians became interested in anesthesia and began to specialize in it. The rapid increase in our knowledge of this subject dates from this time. Regional anesthesia, ethylene, avertin, cyclopropane, spinal, continuous spinal, caudal, intra-tracheal and most recently intravenous barbiturates and curare have all been introduced or advanced during this short period of time under the stimulus and guidance of physicians specializing in anesthesia. Far more has been learned during the past quarter century regarding the physiology of anesthesia than was known prior to this time. The ideal anesthetic has not been discovered and much remains to be learned, but we can be certain that the advances in this field will be made by physicians and not by technicians.

The more extensive surgical procedures that are now carried out require careful evaluation of the patient prior to operation as well as skilful handling of the anesthetized patient. This preoperative evaluation should be made by a physician. The great progress made in neurosurgery, abdominal and most recently in thoracic surgery has demanded a quality of anesthesia that was not required a few years ago. The circulatory and respiratory changes that occur in major procedures on the lung require an anesthetist who can anticipate and meet emergencies which frequently arise during the course of these operations. He always must be able to intubate a patient or aspirate the bronchial tree.

A surgeon who has not had the opportunity of operating with the assistance that a well trained anesthesiologist can offer will find it difficult to realize the relief that is afforded in being able to devote his entire attention to the surgical problem in an ill patient with the assurance that the general condition of the patient rests in competent medical hands. Better surgery inevitably results when the surgeon does not have to divide his attention between the operative field and the patient's blood pressure. The speaker, because of one or two unhappy experiences as the result of indifferent anesthesia, approaches a difficult operation with far more misgiving from the standpoint of the anesthesia than from the question of the technical procedure. This is not prompted by egotism but rather by a realization that despite the fact that the surgeon is responsible for the anesthesia there is little he can do to control it once the operation is in progress. If, on the other hand, a well trained physician anesthetist is available, the surgeon has the comforting thought that, come what may, the patient is in the hands of one who knows more about anesthesia than he does.

The hospital administration should also be concerned in good anesthesia for an infrequently considered advantage is the shortening of patient hospital days by the lessening of post-operative complications. Early ambulation, which is becoming increasingly popular, is predicated upon the rapid recovery of the patient from the effects of the anesthetic. If this is retarded by poor anesthesia or the development of an upper respiratory infection, the patient remains in the hospital longer than necessary and this is a hardship on the individual and institution alike in this time of crowded hospitals.

Another factor that makes a physician desirable from the hospital standpoint is the relative permanence of such an appointment. A physician anesthetist feels that his interests are advanced by remaining in one community just as is the case with any other staff member and the problem of providing a replacement does not arise as frequently as it does with technician anesthetists.

The pre-operative evaluation of a patient with special reference to the type of anesthesia indicated should be largely determined by the trained anesthetist. Many other allied activities are appropriately supervised by the anesthetist. He may be used in a consulting as well as a therapeutic capacity with regard to vascular and nerve lesions. Paravertebral sympathetic injections and nerve blocks for diagnosis and treatment fall within his province. He is usually the last court of appeals in lumbar punctures and in difficult venapunctures for intravenous fluids and transfusions. In some institutions all oxygen therapy is under his direction.

The speaker does not wish to give the impression that all operations require the services of a physician anesthetist. All of us realize that nurses have administered the large majority of anesthesias that have been given in Virginia and they have given

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them extremely well. The patient in good condition who has an operation of average magnitude will do about as well with either type of anesthetist. But the poor risk patients and especially those who are subjected to the formidable procedures which are becoming more and more frequent on our operative schedules are the ones who should have the benefit of a physician anesthetist. Nurses do not relish the responsibility of handling this type of case and it is as unfair to them as it is to the patient to ask them to do so. One physician anesthetist in a hospital of moderate size is adequate to care for the more difficult cases and he is also available to help in any emergency which may arise during the course of other operations in the same hospital. Nurse anesthetists appear to welcome the moral support afforded by a physician anesthetist in the same building.

The Army Air Forces were fortunate in having a number of well trained anesthesiologists in the larger hospitals and in addition to the above duties this medical officer usually was in charge of operating room personnel and equipment. In many military hospitals the anesthetist directed all shock therapy.

The Armed Services rapidly realized the importance of the trained anesthetist and the great increase in the number of physicians now receiving training in anesthesiology is due largely to the stimulus this specialty received during World War II. Anesthesiology was given an opportunity to prove its case and become established during the recent War just as the specialty of orthopedics had done during World War I. Returning military surgeons should find their anesthesia needs met as satisfactorily in civilian practice as they were in military life but this is not generally true in Virginia at the present time.

The question arises as to how this situation should be improved in Virginia. The demand for well trained anesthetists is considerably greater than the supply. At the present time there are only 84 hospitals in the United States which are approved for Residencies and Fellowships in Anesthesiology by the Council on Medical Education and Hospitals of the American Medical Association.[2]

These hospitals provide a total of 260 residencies and assistant residencies in this specialty. As these services are from 12 to 36 months it is probable that not over 125 physicians complete their hospital requirements in order to take the board each year, for a minimum of two years of supervised clinical instruction and graduate study in the basic sciences is required for eligibility. The nearest hospital that gives a course in anesthesiology is located in Washington, D. C., and this offers only one appointment annually for a 12 months period which makes it necessary for the candidate to spend at least one additional year under supervision elsewhere. The closest hospital that offers a two year course is located in New Jersey. This means that the likelihood of well trained men locating in Virginia is remote unless we make a special effort to attract them or provide means of training physicians in this specialty in Virginia. The latter course appears more feasible.

This training should be provided in the two large teaching hospitals connected with the medical schools in Richmond and Charlottesville. The clinical material, the provision for instruction in the basic sciences and the other aids that are found in a teaching institution are all present in these two schools. By establishing residencies in this specialty these hospitals would be assured of a constant supply of physicians who would provide excellent anesthesia while receiving instruction, and the hospitals in Virginia would be able to obtain the services of these men after they had completed their course. A full-time anesthetist and one assistant should be sufficient to handle the clinical as well as the teaching assignments and still permit some time for original work in a field which offers much to an investigative mind. Each teaching hospital could provide sufficient clinical material to permit training at least three assistant residents and resident anesthetists continuously on the basis of a two year course. This would provide three well trained physicians each year to make up the deficit in trained anesthetists now existing in this area.

There are, no doubt, physicians in Virginia who are interested in this specialty but who do not wish to specialize in this branch of medicine exclusively. A one year course in this subject could also be provided which would qualify them as well trained anesthetists and capable of heading this department in the small to moderately large hospitals in this state on a part time basis.

To summarize, I would again like to point out

that Virginia has lagged behind the country at large in failing to utilize the services now offered by trained medical anesthetists. In order to correct this we need centers for the training of physicians in this specialty and this function logically should be assumed by the University of Virginia and the Medical College of Virginia. If such a program is adopted, these teaching hospitals at once will receive the benefit of improved anesthesia, the hospitals throughout Virginia will soon have a supply of anesthesiologists available and, most important of all, our patients will be operated upon under the most favorable conditions it is within our power to provide.

REFERENCES

1. Personal Communication to author, August, 1946.
2. *J.A.M.A.* **131**:1322 (August. 17), 1946.

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DISCUSSION

DR. E. C. DRASH, Charlottesville: Dr. Warthen has pointed out one of the greatest needs in the State of Virginia at the present time. Before the war, at the University of Virginia this question of the training of anesthetists had been brought up; but the advent of the war prevented our carrying out our plans any further. As Dr. Warthen has stated, the training of anesthetists should take place in a University Hospital where all the facilities for research and study are available.

All the new advances in anesthesia have been made by physicians and not by nurses. I am sure none of us wishes to detract from the credit that is due the nurses in anesthesia, not only in Virginia but everywhere. At the beginning of the war the University unit, the Eighth Evacuation Hospital, was furnished with a table of organization which permitted us to have two nurse anesthetists. One nurse was registered; one was not. Unfortunately, the table of organization did not explain to us what to do when we needed additional anesthetists. It was our good luck, however, to have assigned to us a well trained M.D. anesthetist, and I am sure the presence of this man was largely responsible for the efficiency of that hospital. He not only improved the work of these nurses we started with, but trained four additional nurses, trained one dentist in anesthesia, and trained four medical officers in anesthesia. So, during times of push, when we had large numbers of battle casualties to care for, we had a large number of competent anesthetists at all times.

I should like to say that the University of Virginia is cognizant of this need and a sum of money has been set up in the budget to employ such a man. As has been suggested, such an individual should be well trained in physiology, in chemistry, in pharmacology, and in anesthesia. We hope that in the near future such an individual can be obtained, to begin the work at the University of Virginia, and at the Medical College of Virginia.

Many operations now being done are very prolonged procedures. Four hours is not unusual in an intrathoracic or intracranial operation. During that period all sorts of things can happen, and I am sure that anyone who has experienced the skill of a competently trained physician-anesthetist would not want to be without one. I hope that soon both schools can establish a program for the training of physician-anesthetists in Virginia.

DR. FRANK S. JOHNS, Richmond: I am glad that the importance of having the department of anesthesia under a graduate in medicine with special training in this field has again been brought to our attention. For 25 years we have had the benefit of this important adjunct to our surgical department, a doctor of medicine, trained in anesthesia, in charge of our anesthesiology. To the patients it has given the greatest comfort, and to the surgeons the satisfaction of knowing that our surgery is being carried out under the best possible conditions.

As soon as hospitals begin to pay adequate salaries for the service of doctors trained in anesthesiology they will receive the important benefits of better anesthetics.

DR. SEYMOUR SCHOTZ, Richmond: The discussion has been very gratifying. I should like to introduce myself. I have recently come to Virginia for the purpose of setting up a practice in anesthesiology. The subject, to me, is very timely. I feel there is a good job to be done in the State; and I hope that those of us who are experienced and trained in anesthesia can contribute and arouse interest, so that every hospital, small and large, can have the services of a man trained in anesthesia so that all patients, whether the operation is major or minor, can have the benefit of having a trained man on hand to render assistance if necessary.

This discussion is very interesting at this time because the centennial is being held in Boston. It was just one hundred years ago when Dr. Morton gave his demonstration in that city.

I do not think many problems are solved in meetings like this. If we could get together afterwards over a glass of beer or a cup of coffee doubtless many of them could be threshed out.

DR. EVERETT IDRIS EVANS, Richmond: I was very glad to hear Dr. Warthen's paper about the importance of physician-anesthetists. It does seem rather queer, as Dr. Schotz said, that it has taken almost a hundred years for us to get seriously interested in this matter.

I have been in almost monthly contact by letter with some of the leading anesthesiologists, and two things come to my mind. Dr. Henry K. Beecher wrote last month that fourteen of the medical schools of this country are now trying to find professors of anesthesiology. That shows the demand. What are they being offered? Most of the salaries run from $10,000 to $15,000 a year. An appointment to a Medical School Chair in Anesthesiology should be made on the same basis as for other professional appointments, and not on the basis of simple technical skill in the administration of an anesthetic agent.

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PROTRUDED INTERVERTEBRAL DISKS AS A CAUSE OF DISABLING PAIN AND PARALYSIS*

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Since Mixter and Barr[1] established the fact that fragments of intervertebral disks could irritate and compress the root of the sciatic nerve intraspinally and produce low back and sciatic pain, the syndrome of protruded intervertebral disk has become well established. It is now known that fragments of the intervertebral disks may be protruded at any level in the spinal canal with resultant symptoms of pain, paresthesia, weakness, loss of sensation, loss of intestinal and vesical function, monoplegia, hemiplegia, paraplegia and even quadriplegia, followed by death when vital tracts in the spinal cord have been irreparably damaged.

The protrusions most often occur in the lumbar region of the spinal canal and in this region the last two disks are most often affected. As a result, the commonest symptom of protruded intervertebral disk is low back pain with or without sciatic extension.

In the cervical region the fifth, sixth and seventh disks are those most often involved; the resultant symptoms are pain in the neck, upper extremities and upper part of the chest, with or without paresthesia, anesthesia and weakness. If the protrusion occurs laterally in the spinal canal and involves only one nerve root, the distribution of the pain is in the region supplied by the nerve which takes its origin from that root. If the protrusion is large or midline in position, then the syndrome of Brown-Sequard or even quadriplegia may develop.

In the thoracic region of the spinal canal the lesion is likely to produce root pain‡ or paraplegia, depending on the size and site of the protrusion.

Lumbar protrusions are by far the most common, constituting about 95 per cent of all protrusions of intervertebral disks in the experience at the Mayo Clinic. Since the spinal cord terminates in the cauda equina at the first lumbar vertebra, there is more room for a space-taking lesion in the lumbar portion of the spinal canal and, as a result, a lesion must become large before extensive neurologic signs develop. The intact posterior longitudinal ligament helps to maintain the intervertebral disks within the confines of the intervertebral spaces and to return the normally bulging disk to its normal shape after motion of the spinal column and after slight trauma. If trauma, stress or strain is sufficient to rupture the posterior longitudinal ligament, then the annulus fibrosus may give way and permit bits of annulus and nucleus pulposus to project into the spinal canal and remain there. Then the anatomic and pathologic condition known as "protruded intervertebral disk" occurs.

Since the lateral portions of the posterior longitudinal ligament are the weakest parts, the protrusion is most likely to occur laterally and to result in root pain if the corresponding root is irritated or compressed. If the posterior longitudinal ligament is unduly stretched or torn, but there is no encroachment on the nerve root, low back pain alone may result. In many cases in which ultimately operation is performed for a protruded intervertebral disk which has caused full-blown incapacity as a result of low back and sciatic pain, the physician may obtain a history of recurring bouts of low back pain or lumbago extending over a period of years. A majority of protruded intervertebral disks occur at the last two lumbar interspaces and, since this is the site of exit of the roots of the sciatic nerve, sciatic pain is the chief symptom of protrusion of a disk. If the protrusion occurs at the third lumbar interspace, the pain is likely to extend down the front of the thigh and the patellar reflex may be diminished or absent.

Protruded intervertebral disks are accepted rather generally as being traumatic in origin. The trauma may be, and often is, slight and may be overlooked or forgotten by the patient.

The acute attacks of pain resulting from protrusion of an intervertebral disk may subside on rest in bed and the application of heat to the involved part of the back. The use of diathermy is

*Read by invitation before the Virginia Peninsula Academy of Medicine, at Newport News, Va., January 20, 1947.

‡Root pain is pain experienced in the course of a nerve root or the nerve taking its origin therefrom and is usually aggravated by coughing, sneezing, jarring and straining at stool. It is usually worse at night.

often helpful. In the more severe attacks in cases in which low back and sciatic pain or either occur, traction on the lower extremities may be required. For protrusion of disks in the cervical region, traction on the head often proves of benefit in overcoming spasm of muscles.

In the examination in a classic case of protrusion in the low lumbar region, the patient may be found lying uncomfortably in bed or walking with a limp and with body tilted—the so-called sciatic scoliosis. The erector spinae muscles are in spasm and the normal lumbar lordosis is lost. Motions of the spinal column are painful and limited. The so-called straight leg raising test is positive on the side of the pain; lifting of the opposite extremity with the knee extended may result in pain referred to the back and to the involved extremity. If sciatic pain is present bilaterally, then the straight leg raising test is positive bilaterally. There is often tenderness along the course of the sciatic nerve. The Achilles tendon reflex is often diminished or absent. This reflex is more likely to be affected if the protrusion is at the fifth lumbar space. Some impairment of sensation in the dermatome of the root involved and some weakness of muscles may occur, but these are uncommon.

Every patient suspected of having an intraspinal space-taking lesion should receive a careful general physical examination, including examination of the blood and urine, as well as roentgenologic examination of the chest and the appropriate part of the spinal column. In addition, knowledge of the result of a flocculation test for syphilis and of the sedimentation rate of the erythrocytes may help the physician to avoid errors.

Ordinary roentgenograms of the spinal column will not give sufficient evidence on which a diagnosis of protruded intervertebral disk can be made, but they will help eliminate many other conditions which might produce a similar symptom complex.

It is my belief that no patient should have his spinal cord exposed without previous lumbar puncture. So, if the patient's general condition does not contraindicate a major surgical procedure and his symptoms cannot be alleviated by conservative measures, the next step in the examination is diagnostic lumbar puncture. This procedure may be combined with that of visualization of the spinal canal—so-called myelography.

There is diversity of opinion regarding the necessity and even advisability of performing myelography and even of lumbar puncture in these cases. My opinion is that many useless operations will be avoided and those that are necessary can be carried out more satisfactorily if the surgeon knows what the value for total protein of the cerebrospinal fluid is, whether or not he is dealing with one or multiple lesions and what the exact location of the lesion is. A value for total protein of 100 mg. per 100 c.c. of cerebrospinal fluid is seen rarely in cases of protruded disk. A high protein content usually indicates neoplasm.

If a diagnosis of protruded intervertebral disk is made, and the disk is to be removed surgically, the operation should be performed as soon as possible after lumbar puncture and after a report of the results of the spinal fluid examination has been obtained. Only that part of the disk which is fragmented need be removed. It is not necessary to curet out the disk and to try to remove all disk substance. Complete removal of all disk substance seems impossible, is dangerous and evidence secured in follow-up of patients does not indicate that it is necessary. Ordinarily laminectomy or even hemilaminectomy is not required for removal of a lumbar protrusion. After removal of the ligamentum flavum, interlaminal removal of the protruded fragments of disk is usually possible; however, one should not sacrifice safety or risk damaging the root further in order to perform this specialized technic. Until a surgeon has had considerable experience with intraspinal technics he should remove enough bone to expose adequately the involved nerve root.

If fusion of the vertebrae in the region affected is deemed necessary because of coexistence of spondylolisthesis, spondylolysis or other conditions resulting in an unstable back, the combined procedure, that is, removal of the protruded disk and fusion, preferably should be done at the same operation.

After removal of a protruding lumbar disk the patient may be up and around as soon as he feels like it, usually within two or three days. He is able to leave the hospital in seven or eight days. When a combined operation is performed, the patient is kept in bed by the orthopedic surgeons for three weeks, but no cast is used.

The operative mortality rate for protruded intervertebral disks at the clinic has continued to be less than 0.25 per cent.

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The rate of recurrence of protruded intervertebral disks over a five year period is about 5 per cent. At present we do not know how, for sure, to prevent recurrences. A meticulous technic on the part of the surgeon and the avoidance of heavy lifting and straining on the part of the patient until the posterior longitudinal ligament has had time to heal are advocated.

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Directory Plans Underway.

At least two carloads of special lightweight paper will be required for the new American Medical directory, a 3,000-page volume which normally is issued every two years. It is now almost five years since the 17th edition of the directory was published in 1942. The delay has been due to the shortage of clerical help and mechanical labor in the Chicago area as well as to the scarcity of paper.

The Superintendent's Office, which supervises printing production at headquarters, reports that the paper shortage existing for some time has presented one of the biggest problems in getting out the directory. Because of the shortage of compositors in our printing department, composition work on the directory will probably have to be done outside of the A. M. A. plant. Printing, however, barring unforeseen problems, may be done on the A. M. A. presses.

It is hoped that compilation of names will be started within the next few months, so that the 18th edition will be ready for delivery by at least the latter part of 1948. Since publication of the 1942 edition, information on 37,462 new physicians has been added to the files, and the names of 17,860 physicians who have died have been deleted.

Orders for the new directory are NOT being accepted at the present time, but as soon as plans are completed a letter, prospectus and card asking for directory information and advance orders will be sent to every physician in the U. S., its possessions and Canada.

Incidentally the A. M. A. is presently using 310 tons of paper a month for The Journal, Hygeia and the many other special journals devoted to specific fields of medicine.

Poliomyelitis Diagnosed within 24 Hours.

Diagnosis of infantile paralysis can usually be made within 24 hours of the onset of the disease, according to John F. Pohl, M.D., of Minneapolis, and treatment should begin immediately in order to relieve the discomfort of patients and to minimize crippling.

Writing in the July 26 issue of *The Journal of the American Medical Association,* Dr. Pohl, who is from the Elizabeth Kenny Institute, states that "an analysis of 1,125 cases of poliomyelities treated in Minneapolis during the 1946 epidemic reveals that the symptoms and observations are sufficiently characteristic to enable the diagnosis to be established in most patients within 24 hours of the onset. The study also discloses that paralysis is not a useful diagnostic sign because paralysis or weakness of the muscles is not a common early event and in a considerable number of cases does not occur at all. To await the appearance of paralysis to confirm the diagnosis or to begin treatment is inadvisable."

Of the 1,125 cases, 736 or 65.4 per cent progressed to paralysis of some degree within 15 days of onset but 389 or 34.6 per cent did not show paralysis at any time. Sixty-eight patients or six per cent died.

Symptoms of the first 24 hours are: headache, fever, nausea, vomiting, loss of appetite, stiff neck, stiff back, painful arms and legs and general malaise with listlessness.

PRACTICE OF PSYCHOSOMATIC MEDICINE*

JOHN F. WILLIAMS, M.D.,
Richmond, Virginia.

Over 2,000 years ago, Plato said: "So neither ought you to attempt to cure the body without the soul; and this is the reason why the cure of many diseases is unknown to the physicians of Hellas, because they are ignorant of the whole; which ought to be studied also; for the part can never be well unless the whole is well . . . for this is the great error of our day in the treatment of the human body, that physicians separate the soul from the body".[1] Somewhat later Aristotle wrote: "Probably all the affections of the soul are associated with the body—anger, gentleness, fear, pity, courage, and joy, as well as loving and hating; for when they appear the body also is affected." Paracelsus in the 16th century said: "He who wants to know man must look upon him as a whole and not as a patched up piece of work." In the early 18th century the philosophers studied the mind and the medical men the body and the body only. About the time gold was discovered in California the cause of mental disease was still sought in the badness and sinfulness of man.

Psychosomatic medicine is thought by many to be a new term. Nassie and Jacobi's investigations in the 19th century resulted in Jacobi's paper, "Further discussions of the foundations of somatopsychic medicine." Therefore, the first use of this term occurred over a hundred years ago.[11] The word "psyche", taken from the Greek, means "soul", and the word "soma" means "body". "Psyche", says Binger,[1] "relates not only to the mind and thinking but sensation and thinking, and life of the emotions as well." The reappearance of the term "psychosomatic medicine" and of the concept of the patient as a whole, which began over a century ago, is a new attempt to produce today a synthesis of man's total reactions.

All emotion is accompanied by physiological change—sorrow with weeping; joy with laughter; shame with blushing; fear with palpitation and sweating; anger with increased blood pressure and carbohydrate changes.[2, 9, 4, 3, 8] Changes in striated and smooth muscle tension, in secretion and circulation produced by mental stimuli, result in functional change which is reversible. *But long continued emotional stress may produce organic or definite irreversible change.* Hyper-activity of the heart can cause increase in size, and an hysterical paralysis can produce degenerative changes in affected muscles.[6]

The following is a partial analysis of 200 case reports:

SEX	No.	%
Males	114	57.0
Females	86	43.0
Total	200	100.0

MARITAL STATUS	No.	%
M.	126	63.0
S.	41	20.5
W.	16	8.0
D.	17	8.5
Total	200	100.0

SITE OF CHIEF COMPLAINT

	No.	%
Multiple	96	48.0
G. I.	53	26.5
Musculo Skel.	13	6.5
Resp.	9	4.5
Heart	9	4.5
Head	7	3.5
N. S.[1]	5	2.5
Genital	3	1.5
Urinary	3	1.5
(Diabetic)	2	1.0
Total	200	100.0

1. Four were multiple sclerotics, two of whom were previously diagnosed as neurotic.

PSYCHIATRIC GROUPING

	No.	%
Anxiety	105	52.5
Depression	31	15.5
Menopausal Syndrome	16	8.0
Tension	16	8.0
Male Climacteric	4	2.0
Not Classified	8	4.0
Psychotic[2]	20	10.0
Total	200	100.0

2. In this group 9 patients had a provisional diagnosis of psychosis and 11 were considered "nervous patients".

*Presented in part at Staff Meeting of Grace Hospital, Richmond, December 6, 1945.

Read at the annual meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

Of those previously diagnosed as neurotic, 1 had metastatic carcinoma of the spine, another herniation of cervical disc and 1 had spondylitis deformans. One patient thought to be psychotic, but too disturbed to permit examination, was found to have brain tumor. Surgical operations averaged 1.5 per patient. The average number of physicians seen per patient was 5, ranging from 2 to 30.

In this series of 200 cases, certain major factors are dominant. The patient has been seen by many physicians but has not been permitted to tell his story. Questions concerning his illness have not been answered to his satisfaction. He has been told that his illness is imaginary, he "must snap out of it", "pull himself together", "get hold of himself or he'll go crazy". After such remarks have been repeated several times, the patient has acquired another anxiety which he demonstrates by his question, "Doctor, do you think I'm crazy? They tell me it's just my nerves and there's nothing the matter with me. I've tried and tried but I just can't forget that pain".

An excellent somatological history and examination have been done and often repeated but no attempt to associate the pain with the emotions is made. We often forget that there is psychopathology as well as tissue pathology. The traditional approach to the problem must be altered by treating the patient as well as the disease.

There is no standardized approach to the management of these patients. Each should be individualized. The conventional medical history is without much value. It is best to permit the patient to tell his own story without interruption and, if possible, without notetaking by the interviewer. For this, ample time should be arranged.

It is quite usual for the patient to be following a restricted routine which he generally detests. Release from as many "musts" and "have to's" often produces remarkable results. Clinical evidence of malnutrition was present in 100 per cent of the group; therefore, it is believed that tension states, anxieties and related ills result in impaired absorption and assimilation. Brewer's yeast and B-complex in therapeutic doses by mouth are not well tolerated or utilized by these patients. Because of this, parenteral administration in large doses has been used with gratifying results.

After several interviews, complete physical and neurological examination is done and the findings dictated in code. Much can be learned from this. The presence of tachycardia, moist palms and soles, hyper-active but usually equal reflexes, tremor of tongue and hands, and slight incoordination are significant. Movement of a "stiff" joint or painful member (the release of striated muscle tension) can often be accomplished during the course of an apparently irrelevant but friendly conversation instigated by the examiner. As noted by Flanders Dunbar,[6] release of muscle tension is often accompanied by release of long pent up speech. Much significant information can be obtained in this manner. It is quite possible that symptoms of early multiple sclerosis can be interpreted as "neurosis". Of 4 multiple sclerotics, 2 of this type were seen.

The psychiatric survey should be done with great care. Many patients are only too familiar with stereotyped procedures. Much more can be learned from a patient by having him talk about himself rather than of his disease. The psychoses are often masked. What may have been classified as a simple neurosis may prove to be severe mental illness. The differentiation requires training in psychiatry. Because certain unresolved factors may be deeply rooted in the subconscious, prolonged psychoanalysis may be necessary. This is no job for the novice, as overenthusiastic mental probing may aggravate an existing condition. Psychotherapy need not always be complex. Much can be accomplished during the first interview if the physician has the desire to understand a fellow human being.

Satisfaction of the basic hungers is not always possible nor is the patient always conscious of his hunger, which may be expressed somatically. The explanation of "organ language" by Weiss and English[9] may illustrate this important point. Sensitization to certain conditions can occur in childhood,[7] thus producing what may be called an allergy to circumstance.

In conclusion, more understanding of the patient as a whole is needed. The old idea of "either" organic "or" psychic must be disregarded as there can be no true separation.[9] Emotions are linked with bodily changes and, reciprocally, there is a psychic component to visceral disease.[5] Integration may tend to abolish the "thick chart" patient of the clinics and this can be accomplished only by in-

stilling psychosomatic concepts into students during, at least, the clinical years of our medical schools.[5]

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DISCUSSION

DR. HOWARD MASTERS, Richmond: Dr. Williams has presented a subject of which the professional world has become more conscious. It has taken the profession a long time to recognize and accept the mind as an integral part in the functioning of the organism. We might as well accept the fact that medical practice requires time with the patient; the physician who is not a good and patient listener may easily lose the key to the illness. Osler's blanket statement appears sufficient to initiate the discussion: "Psychosomatic medicine is that part of medicine which is concerned with an appraisal of both the emotional and the physical mechanisms involved in the disease processes of the individual patient, with particular emphasis on the influence that these two factors exert on each other and on the individual as a whole."

It is important for us to take seriously the patient's statement of his symptoms or problems and to recognize that these complaints are real to that patient, irrespective of their functional nature. The citizen's concept of a political problem is frequently vastly different from the politician's concept, because the citizen is not a trained politician; neither is the patient trained in medical science, and, therefore, his concept of his symptoms is either the product of his own thinking or of the suggestions of other uninformed and sometimes ignorant individuals, thus producing a fear for one's individual or personal welfare.

The mind is susceptible not only to the suggestions of others but also to autosuggestion. Sometimes the emotional conflict is not adequately expressed, especially when the emotion is not in response to what seems to be the real situation. This constitutes a threat or danger to the individual which produces a physical concomitant or symptom which threatens the security of the individual. This serves to upset the individual's regulatory equilibrium. Some of these inappropriate emotional reactions toward the environment may become inhibited by the patient and be pushed back into the unconscious, where they create a state of tension, either permanently or recurrently, and tend to operate to disturb the functional equilibrium. A patient may laugh, cry, go into a rage, suffer palpitation or respiratory disturbance in the absence of an external stimulus when these reactions have operated long enough to become conditioned responses. The patient frequently says, "I do not know of anything that precipitates my reaction." Not infrequently the reaction may be one of reversion to an earlier age level, which should cause us to begin to search for causative factors in the patient's history or his environment at that level.

We must recognize that when these reactions take place over and over again some body changes must be present. If, for instance, fear is the reaction, physiologically the body must respond to fight or take flight. This reaction involves the vegetative nervous system and alters the blood chemistry according to the psychological nature of the individual. If it is aggression, the blood sugar should rise; if it is escape and flight the blood sugar should drop; and appropriate somatic sensations accompany the reaction.

An interesting example of the recurrence of this reaction in a state of psychic tension is revealed in the history of a young woman, 22 years of age, who, on the first day of entering school at the age of five, returned home and found that her father had left to go to the bedside of his ill mother, who later died. After that, when her father would take her to school she would go in the front door and out the back door, return home, and hide in the garage until school was out, then go into her home as though she had attended school. When this was discovered she said she was afraid. A psychiatric examination revealed that she returned home, where she could be close to her mother and watch her, for she feared that if she were away her mother might die before her return. Later, when a few years older, under psychiatric instruction she was permitted to see several dead people who were in no way related and to whom she could have no emotional attachment; and there was no visible appearance of fear. At another time

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she was taken to a funeral, without expressing any fear. This was to desensitize her to the fear of dead people.

In college she altered her major course from music to psychology and in the summer worked in a psychiatric hospital as a nurse's aid and attended some lecture courses. She then decided to study medicine and returned to college to take her premedical work, but the basic scientific work was boring and uninteresting to her, and she abandoned her training to take a business course. She held one job well but was not satisfied with it because she wanted to do secretarial work in a psychiatric hospital. She obtained such a position and did excellent work. After six months she developed some elation, psychomotor activity, and did not want to go to sleep. About ten days after this began she displayed considerable interest and some mild elation during a period of several weeks of serious illness of a hospital patient, which terminated in death. A few days later a relative of a close friend died, and she attended the funeral and viewed the body.

During her period of elation she slept very little and reduced her food intake to approximately one meal a day. By about the fourth week she had an emotional collapse. She had lived in a home where she had to be excessively quiet and unable to express herself with the average degree of freedom. This had become monotonous to her, and she had obtained another place to live, but the collapse came when she learned this would not be available to her. During this four weeks she could not tolerate any change of method or procedure for fear she could not perform the duty assigned to her. She had a strong urge to run away and go as far as her month's salary would take her. Under sedation she became exceedingly confused and, following it, made numerous attempts to run away. Her blood-sugar level was a flat curve of between 90 and 100; her cholesterol was increased 255 mg. 100 c.c.; her electrocardiogram showed extra systoles and low voltage wave sometimes found in nutritional disturbance. She developed an uncanny interest in death and had a strong urge to return to the side of her mother.

Unconsciously this patient had suffered for many years from fear of the responsibility of herself. She had not emancipated herself from her mother. She obtained the position in the psychiatric hospital because, unconsciously, she wanted protection, but she did not become aware of this fact until her illness had become established. The running away is simply a revival of her earlier fear of death; she exhibited the same psychopathological pattern that she did when she ran away from school and went home. In this case we have an anxiety neurosis, a compulsive reaction, and somatic disorders as the result of years of emotional tension.

We must not, however, overlook the organic possibility of patients with functional symptoms. I have a long series of patients referred in the hospital with a diagnosis of hysterical paralyses or psychosomatic symptoms, whom I diagnosed as having brain tumor (with operative proof) or other organic neurological conditions, such as disseminated sclerosis and paresis.

The important factor is that the complete study which should rule out evidence of organic disease should be made when the patient is first seen. A physician may spend hours on psychotherapy and then, because of the patient's sometimes persistent complaints of physical symptoms, destroy the therapeutic progress by X-raying or re-examining the patient physically. This simply abolishes the patient's confidence in the physician.

DR. T. DEWEY DAVIS, Richmond: This paper of Dr. Williams' I think carries some very important implications to every physician—general practitioner or specialist. It was rather interesting to me some years ago to analyze a large series of individuals with gastro-intestinal complaints as to what might be responsible for those complaints. Approximately fifty per cent of those individuals who complained of indigestion proved to have functional disease as the cause of their symptoms. Approximately twenty-five per cent proved to have organic disease but with a large functional element besides, and the remaining twenty-five per cent were largely organic alone. To my mind, from the treatment standpoint or the planning of the treatment, the patients in this twenty-five per cent with combined organic and functional disease are the most difficult to handle, because one is dealing with something that might be corrected mechanically, by surgery, and something that may be entirely functional; and to decide whether Miss Smith should have her gall-bladder taken out or not taken out is really a medical problem. I teach my medical students that these are perhaps the most difficult of gastrointestinal cases to handle.

It should be emphasized, as Dr. Williams told us, that a functional state can produce organic changes if it persists long enough. We are convinced that peptic ulcer is a functional disease that has organic manifestations. That cannot be proved because we do not know what causes peptic ulcer. We do know, however, that the emotional surges which come under stresses and strains can certainly aggravate the manifestations of peptic ulcers. We also know that long nervous tension can produce changes in the cardiovascular system. I just this last week saw a man of about my age with hypertension, headaches, and the various changes that go with that condition. I have known this gentleman a long time. He is one of those individuals who have been successful, but to attain that success he has worked night and day, trying not only to run a good-sized establishment but to do the work himself. That condition has persisted for five years. He has had repeated injections of vitamin B and has had numerous doses of oreton, by other physicians, but nobody has told him to quit what he is doing. It may now be too late for him to quit in time to be helped.

There are certain individuals who cannot stand these things, and those are the individuals whom we have to slow down. It is trite to say that in the last few years

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we have had to deal with an increasing number of individuals with these emotional reactions; and the largest handicap I myself have found, in having to deal with this large group of individuals who require a lot of time to straighten them out, is that I do not have the time to give them. I have been most happy to see the young men come back and take away some of these patients from me, because I can give patients more time—adequate time, I hope; at least my conscience is clearer. Repeated sound advice is more important than medicine in dealing with individuals of this type.

DR. WILLIAMS, closing the discussion: I certainly appreciate the thoughtful and rather sympathetic discussions of Dr. Masters and Dr. Davis. I have nothing to contribute further. I think they have shown in their remarks that there is certainly a strong environmental factor in many illnesses, and they have brought it out. I agree with Dr. Davis that a patient with combined illness—one having a definite organic illness such as peptic ulcer or a diseased gall-bladder and also having some neurotic symptoms—must be handled with extreme care and patience, and it does require a great deal of time.

I am extremely gratified that two men under whom I had the privilege of studying should have commented on this paper.

Many Patients Have Emotional Illness Complicating Physical Disease.

At least one half of all patients have their symptoms as a result of emotional difficulties in addition to and as a part of the physical disease, according to Raymond W. Waggoner, M.D., of Ann Arbor, Mich.

"Every patient will respond more promptly to treatment of any disease if the physician understands and adequately handles the emotional as well as the physical aspect of the illness . . . therefore it is essential that every physician, whether he is in general practice or in a specialty, obtain some understanding of psychiatric principles and utilizes these principles in the treatment of all of his patients," states the author.

Writing in the June 28 issue of *The Journal of the American Medical Association*, Dr. Waggoner, Professor of Psychiatry at the University of Michigan points out that only about two per cent of the registered physicians in this country are trained in psychiatric procedures; therefore the task of treating emotional illness falls upon the general practitioner.

"Recognition of the importance of emotional factors in illness, a willingness to spend more time with such patients, and understanding of some of the motivating factors in such conditions and the ability to help in the solution of such problems is an essential characteristic of every good physician," states the author.

The physician cautions that since patients tend to exaggerate symptoms of physical illness, great harm can be done by the prescription of unneeded rest.

Handbook On Health Resort Therapy.

The Committee on American Health Resorts of the A. M. A., which was formed in July 1940, met in Chicago recently and voted to have Secretary Howard Carter probe the possibility of publishing a handbook on health resort therapy. They also reviewed the application blank and rules for listing health resorts and voted that mineral waters, commercially bottled at spas, be considered and investigated the same as a drug preparation.

Virginia members of the Committee are Drs. M. B. Jarman, Hot Springs, and Frances Hellebrandt, Richmond.

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UNUSUAL TUMORS OF THE ABDOMEN*

RUSSELL BUXTON, M.D.,
Newport News, Virginia.

During the past ten year period, a number of patients have presented themselves for diagnosis or treatment who have been found to have abdominal tumors of an unusual type. Of these patients nine have been selected as being of sufficient interest to bring to your attention. In presenting these cases it should be made clear that this is not an attempt to report a group of cases with the same final diagnosis, but an effort is being made to bring together cases which have as their presenting sign, or most important finding, a tumor or swelling of the abdomen.

A brief resume of the nine cases in chronological order will be presented; each will show the pre-operative, final diagnosis, and end-result. It is felt that there are some definite conclusions which may be reached by a study of these cases:

Case 1.—C.J. This patient, a 63 year old ship inspector, was admitted to the Hospital June 15, 1937, with a history of abdominal pain and soreness for three months following trauma of the abdomen. On the day of admission a large tender mass was noted just to the right of the umbilicus. He was found to have diabetes mellitus and his temperature was 100.2. This patient was transferred to another hospital before adequate studies were made, his discharge diagnosis being carcinoma of the ascending colon. However, when he was operated upon, a large abscess in the abdominal wall was found, and it was evident that he had had a hematoma of the abdominal wall, which had become infected, and an abscess had developed. His subsequent course was uneventful.

Case 2.—E.H. The patient, a 63 year old white fisherman, was admitted to the Hospital in extremely poor condition with a history of two weeks duration suggestive of intestinal obstruction. He had a fullness in the upper abdomen, on the right side, and a marked elevation of his right diaphragm. His temperature was normal. Duodenal drainage was instituted for two days, but there was no marked improvement and the patient was operated upon with a pre-operative diagnosis of carcinoma of the hepatic flexure of the colon, but a huge mass was found anterior and above the liver. This mass was filled with gas under pressure and thick pus. The appendix was normal but neither the gall bladder nor duodenum were seen. The patient was discharged as improved five weeks following operation and is still living. The final diagnosis in this case was sub-diaphragmatic abscess, with collection of gas, arising from a ruptured peptic ulcer.

Case 3.—O.W. The patient, a fifty year old white carpenter, was admitted to the Hospital May 5, 1944, with a complaint of abdominal pain and a mass of three weeks duration. This had begun following a cold. On examination, a round slightly tender mass was found in the right upper quadrant, apparently attached to the upper pole of the right kidney. A pyelogram was negative but in three days the mass had increased greatly in size, so operation was advised, the pre-operative diagnosis being carcinoma of the transverse colon. At operation, however, there was a large fluctuant mass occupying a portion of the right lobe of the liver. It was found to be a large solitary abscess filled with sterile pus, subsequent studies failing to reveal bacteria amoeba or echinococci, and the abscess was drained. The patient was discharged in two weeks as cured with a final diagnosis of solitary liver abscess, etiology unknown. It is interesting to note that he returned in about ten months with a similar sterile abscess in the abdominal scar which was drained, and he has been well since.

Case 4.—M.C. The patient, a 45 year old colored housewife, was admitted to the Hospital November 11, 1945, with a strangulated umbilical hernia. She was operated upon immediately, and the hernia reduced and approximately twelve inches of gangrencus ileum removed. It was found to be impossible to replace the bowel in the peritoneal cavity due to a tremendous solid tumor extending from the lower border of the right lobe of the liver to the region of the left ovary. Further exposure revealed a parasitic myoma of the uterus which was removed without difficulty. The patient did fairly well for several days but subsequently developed peritonitis following a partial wound disruption and died six weeks after operation. A final diagnosis of strangulated

*Read at the annual meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

umbilical hernia and parastic myoma of the uterus was made.

Case 5.—C.V. The patient, an 18 year old primiparous colored girl, was admitted to the Hospital February 4, 1946. Her pregnancy had been normal until the sixth month when she noted a large globular mass to the right of the uterus. At the time of admission a normally gravid uterus could be palpated to the left of the midline and a large fluctuant mass could be felt on the right side extending from the pubic bone almost to the costal margin. The patient was allowed to go into labor spontaneously and delivered a normal child. After delivery the mass was found to be freely movable and fluctuant, distinct from the uterus, and was diagnosed as a cyst of the right ovary. With this diagnosis ten days post-partum, the patient was operated upon and a tremendously dilated right kidney was removed. She was discharged as cured on her 13th post-operative day, with a final diagnosis of pregnancy at term and right hydronephrosis.

Case 6.—L.S. The patient, a sixty-three year old white housewife, was admitted to the Hospital for a cholecystectomy. She had a typical history of chronic cholecystitis, but her past history revealed that she had had a pelvic operation for adenocarinoma of the right ovary. A cholecystogram showed a poorly-functioning gall bladder and a barium enema showed multiple diverticula of the large bowel. At operation, in addition to a diseased gall bladder, containing several calculi, there was a large simple cyst on the inferior surface of the right lobe of the liver. This cyst which was slightly larger than the gall bladder, was thin walled, and was filled with a clear watery fluid. It was removed without difficulty. There was no evidence of metastasis from the ovarian carcinoma. The patient had an uneventful recovery and was discharged as cured, the final diagnosis being chronic calculous cholecystitis and solitary simple cyst of the liver.

Case 7.—W.L. The patient, a 37 year old colored stevedore, was admitted to the Hospital April 10, 1946. He had had a mass in the upper right quadrant for eight weeks and previous studies, including a cholecystogram, a gastro-intestinal series, and a barium enema had been negative, except for a mass thought to be extrinsic to the stomach. Examination revealed a fixed non-tender globular tense mass extending from the right costal margin to the level of the umbilicus. A diagnosis of cyst of the liver was made, and, at operation, multiple retention cysts were found enlarging the right lobe of the liver. These were filled with thick yellow and greenish material similar to bile. All of the major cysts were opened, and packed, and the patient did nicely and was discharged twenty-two days after operation. Shortly after his discharge he began to feel badly and was re-admitted with high fever and hiccups. An attempt was made to drain a sub-phragmatic abscess and a large amount of pus was obtained but the patient died. At autopsy the liver was found to weigh 4.8 kilo. and measured 45x30x18 cms. and extended up to the fourth rib. The right lobe was almost unrecognizable, being replaced with multiple infected cysts. The left lobe also contained many simple cysts which had not been noticed at the time of operation. The final diagnosis in this case was multiple infected retention cysts of the liver.

Case 8.—J.H. The patient, a 56 year old white housewife, was admitted to the Hospital August 27, 1946, with a history suggestive of chronic cholecystitis, becoming acute immediately before admission. A small exquisitely tender mass was present in the upper right quadrant of the abdomen. A pyelogram was negative and, with a pre-operative diagnosis of empyema of the gall bladder, the patient was operated upon. A large abscess of the upper portion of the right rectus muscle was found. There was apparently no communication with any of the intra-abdominal organs and the cavity was drained and subsequent examination proved the pus to be sterile. The patient had an uneventful convalescence, and was discharged to her family physician with a draining wound. This has subsequently healed and her final diagnosis is abscess of the upper end of the right rectus abdominis muscle, etiology undetermined.

Case 9.—H. The patient, a 63 year old white office worker, was admitted to the Hospital September 10, 1946, with a story that he had had indigestion for three months. Gastro-intestinal x-rays, a cholecystogram, and a barium enema were negative. On admission he was exquisitely tender in the right upper quadrant, and had a temperature of 101. There was a tender indefinite mass just below the costal margin on the right side. The patient was operated upon with a pre-operative diagnosis of acute cholecystitis, but, at operation, a small round area of intensely inflamed omentum

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was found to be adherent to the peritoneum and to the round ligament of the liver. This omental mass was removed and found to be normal except for inflammatory reaction resulting from ischemia. The gall bladder and duodenum were normal, and the appendix showed only a few old adhesions. The patient was discharged on the tenth post-operative day with a diagnosis of localized inflammatory changes of the omentum, cause unknown.

In summary, nine cases have been presented, all characterized by the presence of an unusual or rare type of abdominal swelling. One of these cases being a simple benign cyst of the liver, although interesting, may be dismissed as incidental, and relatively unimportant. However, despite the fact that a tumor is usually associated with a neoplasm, five of the remaining eight cases were of an inflammatory origin, two being abscesses of the abdominal wall, one an abscess of the liver, and one a subdiaphragmatic abscess, enlarged by gas under tension, and one a localized infected area of omentum. The additional cases consisted of one case of tremendous hydronephrosis associated with pregnancy, a case of strangulated hernia together with a huge parasitic myoma of the uterus, and, finally, a case of multiple retention cysts of the liver. With the single exception of this last case, in spite of what was considered adequate clinical and laboratory studies, a correct diagnosis was not reached in any of the nine cases.

This leads to the following self-evident conclusions:

1. In cases with abdominal tumors, despite thorough clinical and laboratory studies, an incorrect diagnosis is often made.

2. The tumors found in the right upper quadrant may be of a very unusual nature.

Discussion

DR. A. A. CREECY, Newport News: The presentation of these cases is an acknowledgment of the difficulties still encountered in diagnosing correctly masses appearing in the abdomen and a reminder that all available diagnostic facilities should be utilized before bringing the case to operation. The thorough physical examination, the X-ray studies, the judicious use of the gastroscope, peritoneoscope, cystoscope, and proctoscope may reduce the number of operative procedures labeled exploratory. Despite these aids, unusual and unexpected situations will often be encountered and bespeak the necessity for a thorough training in pathology and surgery to enable the surgeon to recognize the lesion and to institute the surgical procedure best suited for recovery.

DR. JOHN POWELL WILLIAMS, Richmond: I should like to cite one case as a tribute to the roentgenologist. I will do it very briefly. We received, at the Veterans Hospital in Richmond, a man who had a history of two and one-half months of continuous fever. He had been hospitalized that long and had been sick several months prior to that time. He had been very thoroughly studied at another hospital with all negative findings, except that they thought he might possibly have a deformity of the left renal pelvis. This was back-checked, and nothing was found except that the left kidney was definitely displaced laterally. So we turned to the X-ray man again and had a gastro-intestinal examination for the second time. That had been done before, with negative results at the other hospital. There was a constant crescent-shaped depression along the upper border of the transverse portion of the duodenum. The circle of the duodenum, where it surrounds the head of the pancreas, was widened definitely. In the lateral view, the stomach definitely showed displacement anteriorly. His conclusion was, from those displacements, that the man had a retroperitoneal mass, which nobody had ever been able to palpate or even suspected during the course of his long illness. The man was explored through a left renal incision. There was a retroperitoneal mass which could be felt extending along the vertebral column as far as the exploring finger could reach, and across the midline. There was also a lymph node which was very conveniently placed for biopsy. This was removed and on examination proved to be very malignant Hodgkins' disease, the Pell-Epstein type.

DR. W. L. PEPLE, Richmond, Virginia: Perhaps I should not undertake this discussion at all because I was under the impression from the title of the paper that it was concerning new growths, which was meant by the term "tumor." I brought along a few slides from a paper which I presented at the Academy under the title of "Strange Tumors."

The first case was that of a married woman in her late thirties who had never been pregnant. She developed a tumor accompanied by irregular bleeding. The tumor was soft and felt for all the world like a pregnant uterus. The more we studied her case, the more puzzled we became as to what it could be. We called in an obstetrician who advised a lipiodol test. The result more than ever convinced us that we were dealing with an abnormal pregnancy. One can see the crescent-shaped area between the tumor mass and the uterine wall, looking just as one would expect it to look if we were dealing with a pregnancy. She continued to bleed and we decided that nothing short of a hysterectomy would be the appropriate thing in her case, no matter what she had. When it was done, it revealed a soft, submucous, degenerating fibroid tumor, about the size and shape of a 2- or 3-months pregnancy. She made an uneventful recovery.

The next case was an unmarried school teacher in her early forties who was said, for a year or more, to be undergoing the change of life. At last she found a doc-

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tor who made an examination and he referred her to me. The picture shows a drawing in the long axis of the body; in other words, a sagittal section. You will see a small uterus high up in the abdomen; the vagina is occupied by a large tumor that fills it and presses up into the abdomen. It occupies the whole of the true pelvis. The interesting feature here was the difficulty of approach. The tumor was so large and so tightly fitting the vagina that one could not get in a hand or instrument to detach the tumor from the cervix, so we did a section from above and proceeded as we would with a complete hysterectomy. We then pushed down on the tumor from above and had an assistant, after removing part of it from below, to pull it out of the vagina. It would have required an enormous hole in the vaginal vault to have gotten this tumor through, and it would have inevitably spilled much contaminating material into the abdomen if done any other way. The vagina was repaired from above in the usual way after complete hysterectomy. The patient made an uneventful recovery.

The last slide was that of a little bit of an old maid, some 68 years old and very frail. She came to me with a cancer of her breast, a rather small growth in a very small organ. I took the breast off and two years afterwards she came back with pain in her hip and thigh. I thought she had metastasis in the hip bone or in the pelvis, and I took some X-ray pictures expecting them to look as if the cut-worms had been after her. This is what we found: a perfectly clean hip bone and a fibroid tumor with a calcified center. She had no metastasis at all. Fibroid tumors do not calcify in a short time, and I concluded that she had some rather acute condition to account for her pain. I put her on salicylates and the pain in her thigh left. It would have been quite an operation on so frail a creature to take out her uterus, and probably all that I would have had left would have been a very interesting specimen.

DR. BUXTON, closing the discussion: I thank Dr. Peple and the other discussers for their kindness in discussing this paper.

There is very little that I have to add except to say that I agree thoroughly that we have to follow our hunches in these cases to a large extent. There is no way in the world that anybody can come out flat-footedly and say that any one individual, with these conditions, should or should not be operated on. I do think that, in spite of very thorough study by the internist and the radiologist and the surgeon, many of these cases cannot be definitely diagnosed prior to operation.

Floral Eponym (54)

GLOXINIA

BENJAMIN PETER GLOXIN, FL. 1785

Gloxin was a physician and botanical writer of Colmar. His graduation thesis at Strasburg was *Observationes botanicae* 1785.

Gloxinia is a genus of tropical herbs of the Gesneriaceae family. They have leafy stems and axillary violet flowers. The six species are scarcely known in cultivation. The popular green house plants that are known as gloxinias are really sinningias. Sinningia is a closely related genus from Brazil and is named for Wilhelm Sinning, a German gardener.

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VIRUS PNEUMONIA—A BRIEF REVIEW*

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Primary atypical or virus pneumonia was first described in 1935. Since that time there have been increasing numbers of reports showing this disease to be world-wide in distribution, increasing in incidence, and apparently more widely varied in its clinical picture than was originally suspected. Although it has been subsequently described as heretofore unrecognized, this fact does not appear likely when one considers the typical clinical picture, together with the numerous variants that have been brought to attention. Should the causative agent be established as a previously known virus, this would not deter from the fact that this agent has developed a new effect upon the human organism.

The causative agent is considered to be a virus or group of viruses whose type has, as yet, been undetermined. Because of this fact, this disease has been labeled under various terms by different observers. The absence of a specific agent makes any terminology awkward. It may be associated with Q fever, the virus of influenza, or other viruses or combinations of viruses. To the clinician, however, the general term, virus pneumonia, should be adequate for the time being.

Certain cases may go unrecognized because of the mildness of symptoms, and others will not seek medical attention for the same reason, but this is true of any infection. The slow progress and long-continued weakness of many of those under treatment makes one wonder if the percentage of those who do not seek medical attention is not rather small. Certainly, some individuals are seen complaining of weakness following a protracted "grippe" and are essentially convalescent when so seen, but the point is that most persons with virus pneumonia seek medical attention sometime during the course of their disease.

Typically, and in young adults, onset is that of a severe "flu" or "grippe". Usually the complaints are of general malaise, weakness, and a non-productive cough, although the latter may not be present at the outset. The temperature shows considerable elevation and ranges from 101 to 104 degrees, and it is usually septic in type. The blood picture is normal or slightly elevated. Frequently the patient will state that he has had the flu for a few days; then he noticed an increase in his cough and weakness. In early stages, it is frequent that little is found in the physical examination to substantiate more than an upper respiratory infection; later, wet rales are usually present. It is noted that not infrequently the examiner finds changes in breath sounds and rales in the side opposite to that reported by the radiologist as showing consolidation. A paroxysmal, non-productive cough may constitute the only clue that would lead one to suspect the presence of a virus chest infection, in the absence of findings other than fever.

To establish an early diagnosis the most important examination is that by x-ray. X-ray evidence is nearly always present, especially in those cases which have run considerable fever, but positive reports may be misleading and may vary to a not inconsiderable extent. Miliary tuberculosis, tuberculous infiltration, fungus infection, malignancy, and other forms of radiologic pulmonary findings have been erroneously reported, as well as the "typical" pneumonitis usually seen in one or both bases. Conversely, and fortunately, such conditions are more uncommonly reported as virus pneumonia. Jensen[1] has elaborated upon this latter possibility.

Recovery from the acute infection can be expected in from 12 to 20 days as an average. By recovery is meant subjective improvement in the patient, diminution in cough, return of the temperature to normal usually by lysis, and some improvement of the x-ray findings of the lungs. Convalescence is prolonged. In a study of atypical pneumonia among college students Contratto[2] found the average hospital stay to be 10 days, and the average time of disability 21 days. In addition, he called attention to the weight loss of from 10 to 20 pounds. Weight loss may exceed 40 pounds, however, and weakness can persist for weeks.

In the areas of lung infection, there is present a marked thickened exudate, and the underlying bronchial membrane shows a hemorrhagic state. The pathologic picture has been characterized as one

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of interstitial pneumonia and purulent bronchitis[3].

The presence of virus infection of the chest should be considered, however briefly, in any positive radiogram. The ability of virus infection to establish radiologic evidence may confuse rather than clarify the picture in a patient past the 4th decade. In such individuals, the temperature curve is occasionally lower and more prolonged and may persist for an extensive period, and chest findings are more frequent in the physical examination. The cardiac patient, compensated on digitalis, may show mild dyspnea and dependent edema from the presence of virus infection. In such cases, the severe cough with little or no production is of great benefit in the differentiation.

An older patient, especially if he has been observed previously in his life for tuberculous infection, may present a confusing picture. In the absence of positive sputum examinations, differentiation would seem to lie chiefly in serial radiographs taken every 10 to 14 days. Such a case is as follows: this 62-year old, white male was admitted on July 27, 1946, with the chief complaints of weakness, dizziness, and loss of appetite. Patient stated weakness and dizziness began about two years before after having been in the Pacific area. He had had operational fatigue. He had three attacks of dizziness and near syncope during this time. Patient stated his loss of appetite had been present for approximately 3 weeks, but he noticed no particular weight loss. Eight years previously, in 1938, he had a lesion in the right apex which necessitated hospitalization for about 10 months. The physical examination revealed an elderly, poorly nourished, fairly well developed, white male, appearing chronically ill. Physical examination was not remarkable except for increase in breath sounds over the right apex. Laboratory examination showed negative urine and blood picture. Examination of feces for blood and ova was negative. Blood serology was negative. Blood sedimentation rate was moderately elevated. Gastric analysis showed normal acid content and no tubercle bacilli. Examination of sputum was negative. X-ray examination of chest on July 28, 1946, showed a questionable lesion involving the right upper lobe. Re-examination on August 2 with stereoscopic films incurred the following report: "Re-examination of the chest with PA stereoscopic films shows a definite infiltrative lesion in the medial portion of the right apex. I can make out no definite cavitation, but I feel that we are dealing with an active inflammatory process which probably is tuberculosis. I would recommend further physical work-up and sputum examination." Further sputum and other examinations were negative. X-ray examination on August 19 resulted in the following report: "Re-examination of the chest and comparison with the films made previously shows almost complete disappearance of the process in the medial portion of the right upper lobe. No other lesions are noted. Impression: The rapid involution of this would make a diagnosis of tuberculosis by x-ray extremely questionable. I feel that the process is atypical bronchopneumonia." Upon discharge, he was advised to get more rest and to have a check-up. This was done at a New Jersey state sanitarium, and he was cleared of tuberculosis. Unfortunately, we have not always been as careful in differentiation. A diagnosis of virus pneumonia must be made by exclusion in such cases if error is to be avoided.

If the patient is seen in a hospital where routine serologic examination is performed, a positive or doubtful report is not uncommon in the presence of virus pneumonia. In a series of 50 virus infections seen in Connecticut in 1943, 4 cases showed positive, and 2 showed doubtful Kahn reactions. This had not been encountered previously by any of our group, and serum on the first instance was forwarded to the Venereal Disease Research Laboratory, Staten Island, New York, for a battery of serologic tests. All tests were reported as 3+ or 4+ with the exception of a negative Mazzinni test. The patient in question denied venereal infection in any form and subsequently was told to report monthly for serologic examinations. At the end of the third month his serology was negative, as were all others following. A titrated Kahn or Eagle determination should be repeated periodically until the presence or absence of syphilis is definite. One case was seen in which a seaman presented himself complaining of a coryza which developed into nothing further. His physical, laboratory, and x-ray examinations were negative, with the exception of a positive Kahn reaction. It is interesting to note that his serology reversed in six weeks. In this hospital in the past four months, three serologic false positive reactions have been seen.

In a personal communication, Mahoney[4] stated that "The strain in the virus encountered along the Eastern Seaboard appears to be different from the

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strain encountered in the other parts of the country. At least, there appears to be a larger number of false positive reactions produced in this section than in any other section of the United States. This is an impression, however, and I doubt if it could be substantiated by actual figures."

The presence of a bird virus should be considered in the presence of atypical virus infection of the chest. In reporting the first case of psittacosis in Iowa, Laubscher and others[5] directed attention to psittacosis as an etiological factor in cases of atypical pneumonia. For practical purposes, it would appear that a history of association with psittacine birds would be of help in such cases. Levinson, Gibbs, and Beardwood confirmed their suspicions of ornithosis in six cases of sporadic atypical pneumonia by means of complement fixation tests[6]. Further study of bird viruses might be of benefit in establishing the etiology of virus pneumonia.

The treatment is essentially symptomatic[7]. Penicillin or a sulfa drug should be used in adequate dosage where the presence of secondary infection is established or even suspected. The routine use of these drugs in virus pneumonia, as such, is not justified because no beneficial effect upon the course of the disease is obtained. Due to the hazards of sulfa medication, penicillin is the drug of choice. To obtain rest, control of the severe cough is necessary. In the acute stage frequent doses of brown mixture with ammonium chloride has been found to be of real benefit in thinning the exudate and relieving the tightness. Perhaps ammonium chloride alone would be as beneficial. If a narcotic, such as codeine, is used, double the usual dosage must usually be employed if the cough is to be sufficiently controlled to allow rest. An expectorant is more rational, however, and ultimately of more benefit than is a narcotic; in those cases in which cough is not a prominent feature, resolution may be prolonged. Diathermy or infra-red heat to the chest in 10-minute periods 2 or 3 times a day is of benefit in the convalescent stage. In the apprehensive patient with a sensitive cough reflex, the sedative effect of heat makes it even more beneficial.

Following return of the temperature to normal and improvement of symptoms, prolonged rest is necessary in most cases. From repeated experience with recurrences, we have learned that the patient should spend at least one day in convalescence for every day in bed. This is a minimum. He should be thoroughly well before he is returned to work.

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Medical Society of Virginia Cancer Committee

Chairman, GEORGE COOPER, JR., M. D.

Room 383, Medical School Building, University, Virginia

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Bone Cancer

The problem of cancers which, in their early stage, are not accessible to palpation, direct inspection, or inspection through simple scopes is admittedly disheartening. Yet when we analyze any one group, we usually find several points, attention to which promises improvement in present poor results.

The most common primary bone cancers are osteogenic sarcomas, chondrosarcomas, fibrosarcomas, and Ewing's tumors or endothelial myelomas. Most of them develop in the age group between fifteen and thirty-five. No part of the skeleton is immune, but the distal portions of the long bones are the most frequent site. Ewing's tumors can be counted on to appear at unexpected locations.

Bone cancers, fortunately rare, pose at best an extremely difficult problem in early diagnosis. Yet without early diagnosis, even worthwhile palliation can often not be accomplished.

The average interval between appearance of the first symptom of primary bone cancer and institution of surgical or radiologic treatment is from ten to twelve months. Only by shortening this interval can mortality be reduced. The interval can be shortened by careful attention to *the one symptom that usually occurs early in the development of a bone sarcoma - pain.*

In the early stage of a slowly growing tumor, moderately severe pain is usually the only symptom. There may be just a feeling of "something wrong." Sometimes pressure on the part does not produce pain but use of the part does. The discomfort may be constant or intermittent, and is sometimes dismissed as "growing pains" of childhood. Incidentally, the term "growing pains" should be deleted from the medical vocabulary. Trauma excepted, bone and joint pain in childhood is almost invariably due to one of three diseases, rheumatism, bone tumor, or osteomylitis, all three of which require prompt, vigorous treatment.

When, as is less frequently the case, the tumor is a rapidly growing one, the pain is often intense, cyanosis and venous dilatation are seen in the overlying skin, and a systemic reaction, manifested by fever, takes place.

Most striking is the frequent coincidence of trauma and subsequent discovery of a bone cancer. That there is any causal relation between trauma and the origin of the cancer is now generally discredited, but most bone tumor patients volunteer the information that an injury marked the beginning of their trouble.

Early diagnosis depends on prompt investigation of bone pain which persists more than a week. A history of recent trauma must not be accepted as an explanation but must be recognized as an added danger signal.

A painstaking physical examination should be followed immediately by an *x-ray consultation.* The changes in bone or periosteum may be so slight that they would not be discovered in a routine x-ray examination, whereas, if attention is focused on a clinically predetermined area the pathologic process may be discovered. The radiologist must be consulted as a clinician, interested in the investigation of disease by a special method, not as a photographer of the human body. To demonstrate an early bone tumor, he must frequently obtain views of the area under suspicion in multiple planes, make plates of corresponding bones for comparison, and also x-ray other parts of the skeleton. In addition, when his initial results are suspicious but inconclusive, he must do repeated examinations.

The next step is *surgical consultation to decide on the advisability of biopsy.* Since it is difficult to obtain diagnostic material by biopsy, even multiple biopsies, from a bone tumor, the radiologist, surgeon, and pathologist must consult together to determine the site or sites of biopsy. Because of the limited value of bone biopsies for diagnosis of early cancers, the roentgen studies must often form the basis for decision as to treatment. In general, Ewing's tumors are treated by radiation, the osteogenic, chondro-, and fibrosarcomas by amputation.

Only by close collaboration between clinician, radiologist, surgeon and pathologist can the best results be achieved.

INVESTIGATE IMMEDIATELY AND FULLY BONE PAIN OF MORE THAN A WEEK'S DURATION, EVEN IF INITIATED BY TRAUMA.

THE FATE OF THE CANCER PATIENT IS IN THE HANDS OF THE FIRST PHYSICIAN HE SEES.

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WATER BALANCE*

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In a discussion of any topic as broad as water balance, it is difficult to obtain a comprehensive view of the entire subject. With that fact in mind, this discussion will be systematically presented as (1) a brief outline of the sources of water intake and the methods of water output; (2) a description of the chemical makeup and anatomical division of body fluids; (3) forces that vary fluid volumes; (4) application of these principles to intravenous fluid therapy.

The fluid of the body is replenished in two ways: (1) by the intake of liquids or moist foods; (2) by water formed from the metabolism of ingested food or body tissues themselves. Collar and Maddock[1] give 2500 cc. as the normal water intake in the healthy adult, dividing this into 1200 cc. of water as such, and 1300 cc. derived from metabolism of ingested food or body tissues. In the event that adequate food or drink is not ingested, the body materials themselves are called upon for utilization, with glycogen, protein, and fat being the important sources of water.

Water is lost from the body in the urine, feces, saliva, and evaporation from the skin and lungs. Best and Taylor[2] give the following figures for water output: urine 1500 cc., feces 150 cc., skin 500 cc., lungs 350 cc., for a total of 2500 cc. in a healthy adult. One is impressed by the very accurate adjustment between available water and excreted water. At first glance such adjustment would seem to be too perfect, but this is precisely what happens, generally not for one single day but day after day. The almost constant body weight of certain individuals for months or years is similarly remarkable when we consider the ingestion, secretion, and excretion of the many kilograms of material that occur daily.

From the viewpoint of water and electrolyte balances, Darrow[3] states that the chemical anatomy can be described in terms of three tissues. The first of these is bone, which contains almost all of the body calcium, extracellular phosphorus, and almost 33% of the total body sodium in adults. Since this sodium is bound up in the calcified bone matrix, it is available for body use only when extreme degrees of decalcification occur. Since significant fluctuations in the amount of bone calcium are not likely to occur in the short period of time when we are concerned with problems of fluid balance, we shall not concern ourselves with this relatively negligible effect.

The second category of tissues makes up the extracellular fluids, of which blood plasma is a good example. Other examples of such fluid are spinal fluid, gastric juice, bile, pancreatic juice, and sweat. In general, the electrolyte concentration of all these fluids is similar, but by no means identical; they all contain large amounts of bicarbonate with the pancreatic juice containing the largest of this ion. Altogether, extracellular fluids make up about 20% of the body weight in adults. As shall be elaborated later, maintenance of the integrity of extracellular fluids depends to a great extent on the concentration of the sodium and chloride ions. It is obvious that extracellular fluids may increase or decrease in volume, as in edema or dehydration, or they may show an increase or decrease in electrolyte concentration, as in alkalosis or acidosis. Some mention will be made later of the effect of these changes on the total body electrolyte balance, as well as the body as a whole.

The third category of body fluids is made up of the intracellular fluids, characterized largely by skeletal muscle and also by cardiac muscle, brain, and liver. Here, again, electrolyte concentration of these tissues is similar in most respects, but by no means identical. The characteristic feature is a high concentration of potassium, phosphorus, and magnesium ions, and low concentration of sodium and chloride ions. The amount of intracellular water is chiefly dependent on the potassium ion within the cell, although some effect is obtained from the concentration of the extracellular sodium.

Forces that alter the volume of extracellular and intracellular fluid are many and varied. It is well at first to point out some of these forces and their effects, and then to describe some of the clinical states associated with such changes. Smith and

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Mendel[4] in 1920 showed that within a few minutes after intravenous injection of quantities of glucose or saline solutions equal to the total blood volume of the experimental animal, the blood volume had returned to practically normal, and there was no gross evidence of fluid accumulation. Water taken in through the gastro-intestinal tract is handled in much the same way and stored in the interstitial spaces. With the introduction of fluid into the blood stream, the hydrostatic pressure is increased and the colloidal osmotic pressure undergoes a decrease; this accelerates the flow of fluids from the capillaries into the interstitial spaces. Conversely, processes conducive to dehydration and hemo-concentration detract from the volume of extracellular fluid.

Changes of hydrogen ion concentration in the body fluids also contribute to changes in the volume and distribution of such fluids. This contention has been supported chiefly by the work of Van Slyke[5]. He has shown that when an acid is added to a biological medium containing protein, the acid anion combines with base from the dissociated acid salt. Such a substance increases greatly the osmotic pressure of the cells over the interstitial fluid since they, the cells, contain more protein. This consequently results in an intracellular water shift. Alkalinization causes the reverse process to occur, producing an extracellular water shift.

Cellular membranes within the body seem to be generally permeable to water, hydrogen, glucose, and ammonia, but to few other solutes. As shall be pointed out later, it has been demonstrated that sodium and potassium may at times cross cell membranes, but do not under ordinary circumstances. Solutes that pass uniformly and freely through cell membranes contribute to the total osmotic pressure of all media, but have a negligible effect on the water shifts. The fact that cells can transform glucose into glycogen enables them to store large quantities of such material in the form of large molecular structures which exert minimal osmotic pressure effect. Lipoids also are virtually osmotically inert, because of their insolubility. Protein complexes would share the same position if they were not able to freely and readily combine with other substances as discussed above (Peters)[6].

Of chief concern in internal water exchange is the concentration and distribution of electrolytes. Earlier ideas about the distribution of electrolytes have had as their basis the assumption that cell membranes are for all practical purposes impermeable to cations. Darrow[3] points out, however, that such is not the case, and he further states that it has been demonstrated that both sodium and potassium may cross cell membranes (this fact had been demonstrated in experimental hemorrhage, shock, and in anoxia). It remains a fact that many phenomena can be best described by assuming that adjustments to changing sodium concentrations in extracellular fluids are brought about by shifts in water, rather than shifts in electrolytes themselves.

As stated previously, changes in concentration of serum sodium are a definite and most important factor in the distribution of body fluids. Increases in serum sodium lead to an extracellular shift of water in an effort to increase the concentration of intracellular potassium; conversely, decreases in serum sodium concentration lead to an intracellular water shift in an effort to decrease intracellular potassium concentration. Both of these phenomena go on until a stage of equilibrium has been obtained. The process is the same as the swelling and shrinking, respectively, of erythrocytes in hypotonic and hypertonic salt solutions.

Various forces that alter the volume of extracellular and intracellular fluids have been discussed. Among these are intracapillary hydrostatic pressure and colloid osmotic pressure, hydrogen ion concentrations of body fluids, and the distribution and concentration of the electrolytes. It is felt by many observers (Darrow)[3] that this latter factor is the most important of all from both a physiological and a clinical viewpoint. It is felt that the volume of extracellular and intracellular fluids depend chiefly on concentrations of sodium and potassium, respectively, in those fluids.

When the output of water exceeds the intake from any cause, the body is said to be in a negative water balance, and a state of dehydration results. Dehydration may result from a number of causes: first, simple deprivation of fluids; second, excessive loss of water as in excessive and persistent vomiting (pyloric or intestinal obstruction), prolonged diarrhea, abnormal diuresis, and excessive sweating; third, injection of hypertonic sugar or salt solution into the blood stream with production of a rise in osmotic pressure of the blood which causes a flow of fluid from the tissues into the vascular system, increasing the blood volume which soon returns to

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normal through loss of fluid back into the tissues and later excretion by way of the kidneys, and results in the loss of body water or dehydration; and fourth, and undoubtedly the most important factor involved in dehydration, the reduction of the total concentration of electrolytes in the body fluids. Darrow[3] points out that the most important fact to remember is that the central feature of clinical dehydration is practically always a deficit of electrolyte, particularly extracellular electrolyte, and associated with this may or may not be net deficit of body water. The electrolyte concentration of body fluids is maintained constant by elimination or retention of water, or, stated another way, a decrease or increase in the total electrolytes which are comprised of sodium and potassium (basic radicals) and bicarbonate and chloride (acid radicals) is accompanied by corresponding decrease or increase in the volume of body water. As Grasscup[7] points out, the total of basic ions (sodium, potassium, calcium, and magnesium) must equal the total of acidic ions (chloride, bicarbonate, phosphorus, proteinate, organic acids), but the basic constituents are much more important because deficiences of these ions must be replaced in the diet. On the other hand, deficiences of the acidic ions (e.g., chloride or bicarbonate) are temporarily relieved by a reciprocal rise in concentration of other acidic ions. The total concentration of electrolytes in body fluids is therefore dependent on the total fixed base. When excessive amounts of chloride ions are lost, as in pyloric or high intestinal obstruction with persistent vomiting, a reduction of blood chloride occurs. Such a loss of chloride at first causes no ill effects, normal electrolyte concentrations being maintained by a rise in plasma bicarbonate due to retention of carbon dioxide and an extracellular shift of bicarbonate ion. If, however, such a chloride loss is not replaced, or if it continues, alkalosis will result with increased excretion of the base in the urine, resulting in diuresis and further dehydration. On the other hand, the continued loss of basic radicals (sodium) due to diarrhea, intubation, or external fistula, leads to an immediate depletion of base which cannot be buffered by a reciprocal rise of another basic ion, as is the case with acid radicals. The first response to this reduction in base is a reduction of plasma bicarbonate by an intracellular shift of bicarbonate and the removal of larger amounts of carbon dioxide through the lungs. There then follows an excretion of excess acid radicals in the urine, again resulting in a loss of water.

That the kidneys play a definite role in maintenance of normal electrolyte concentration as illustrated in clinical dehydration is well discussed by Abbot[8]. He points out that when dehydration is mild, the body gives up water to the kidneys in an attempt to maintain a normal electrolyte pattern, but should the state of dehydration become more marked, the water can no longer be spared in amounts sufficient for the formation of urine. There results a marked distortion of the blood chemical picture with resulting changes in the normal electrolyte picture. It is at this stage of marked dehydration that there is insufficient urine output to take care of the excretion of nitrogenous waste products and, as a result, there is a rise in nonprotein nitrogen readings. It has been emphasized by many observers (Marriott)[9] that if such alterations in kidney function as just described were allowed to remain very long, irreparable kidney damage might occur. Frequently the urine contains albumin, casts, and cells, and after rehydration, the kidneys are frequently unable to concentrate urine in normal fashion.

The mechanism of certain other symptoms of dehydration are not clear, but a practical point that needs emphasis is the fact that conditions producing loss of water and electrolytes also tend to cause a loss of plasma proteins with resultant shock. It is for this reason that patients suffering from severe and marked dehydration should be given whole blood as well as salt solution.

Edema is an excessive accumulation of fluid in extracellular spaces. It may be manifest, occult, or latent. It may be local or general, and part of a systemic disturbance. As stated previously, extracellular fluid is formed by filtration under pressure at the arteriolar end of the capillaries. As the hydrostatic pressure falls toward the venous end, the colloid osmotic pressure of plasma proteins draws fluid back into the vascular system, under the effect of opposing hydrostatic and colloid osmotic pressure. The energy for this movement comes partly from the pumping action of muscles, and partly from the pulsation of arteries and arterioles. Edema may arise whenever a failure in fluid movement causes more to be filtered out of the vascular system than is absorbed. It may result from wide arteriolar dilatation with increase in intracapillary hydrostatic

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pressure, hypoproteinemia with decrease in colloidal osmotic pressure, increase in venous pressure with increased hydrostatic pressure at the venous end of the capillary, or obstruction of lymphatic channels. Apart from hypoproteinemia, mechanical failure of fluid movement is only very rarely seen, and then as a terminal cause of generalized edema. Rather, the cause for generalized non-hypoproteinemia edema must be sought in the operation of controls of extracellular fluid volume. Actually the problem in this type of edema resolves itself into one of simultaneous water and sodium ion retention. Regardless of which factor predominates, edema develops; of the two components, water is much more easily retained. Sodium retention and edema can result only from impaired sodium excretion. Since the principal site of sodium excretion is the kidney, sodium retention is therefore associated with functional or structural disturbance of renal function. In either case, restriction of dietary sodium below the minimal level of sodium excretion must ultimately result in loss of water and salt, and therefore in correction of edema (Carcaran)[10].

As a conclusion, it is well to briefly mention the fluids available for intravenous use, their indication, and chief values[11]. The first is whole blood. For hemorrhage it is specific and curative; for shock with peripheral circulatory failure, it is one of the best forms of therapy; when loss of protein occurs, as in large purulent wounds, massive burns, or following prolonged diuresis with washing out of native proteins, blood transfusion is the ideal therapeutic agent.

The second is acacia solution. It has one advantage over crystalloid fluids in that its larger molecular size prevents its diffusion into interstitial spaces. In shock, experimental evidence has revealed that it produces a more lasting elevation of blood pressure than either normal saline or Ringer's solution. However, the possibility of certain renal complications that have been reported have caused many observers to become doubtful of its value.

The third is glucose, given as a 5% solution. It has ideal qualifications in the presence of ketosis from any cause, or in cases of moderate, but persistent vomiting or diarrhea. It may be used intravenously in that strength which is isotonic with plasma in order to introduce the effect of distilled water and evoke a diuresis.

The fourth is saline solution. Salt, in 0.85 or 0.4% solution, may be used in cases of alkalosis or acidosis provided there is adequate kidney function. The physiological saline solution is quite beneficial, when used with 5% glucose, in cases of moderate dehydration without signs of acidosis or alkalosis. Saline solutions of 5 to 10% find their greatest usefulness in water intoxication, i.e., the retention of water without salt, probably due to a derangement of the tubular reabsorption mechanism controlled by the anterior pituitary hormone. In circulatory failure of either central or peripheral origin in the advanced age group, and in the presence of obvious kidney damage, the quantity of sodium chloride must be carefully followed if complications are to be avoided.

The fifth is Ringer's solution. It is to be used for the same indications mentioned for physiological saline. It has the added advantage of supplying the other cations, calcium and potassium, in the same concentration found in normal plasma.

The sixth is Hartman's solution. It is a slightly diluted Ringer's solution, plus sodium lactate. The dilution makes it hypotonic to plasma and so evokes a swifter diuresis. The chief advantage of this preparation is the fact that it furnishes an alkalinizing salt, immediately available for neutralization.

The seventh is water itself. Its most important function is the supply of the medium in which the kidney can perform its function as the controlling mechanism in the maintenance of the acid-base balance. For this purpose it is irreplaceable. It also may be used to release edema due to salt retention. However, it should not be used to replace lost tissue or plasma fluids, since the body normally cannot retain water without salt. Distilled water as such should not be given intravenously since it may take the red cells in contact with it. It may be given with 5% glucose; the glucose is metabolized and the distilled water left behind.

The eighth is concentrated glucose or sucrose (50% solution). The use of concentrated solution for purposes of dehydration in acute cerebral trauma had its origin in 1919. States of water retention manifested in areas other than the cranial cavity are equally amenable to dehydration. The physiological mechanism consists of the withdrawal of extracellular fluid into the vascular bed by the increased osmotic tension exerted by the concentrated solution. This is carried to the kidneys and excreted. Sucrose is preferable since it is a non-

metabolizable sugar when injected intravenously, is of large molecular structure, does not diffuse out of the vascular system, and is quantitatively excreted by the kidney.

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Penicillin for Eyes of Newborn.

A Memphis, Tenn., physician points out that penicillin is superior to silver nitrate in preventing the development of inflammation in the eyes of newborn infants.

Writing in the August 9 issue of *The Journal of the American Medical Association*, H. Charles Franklin, M.D., from the Department of Obstetrics and Gynecology, the University of Tennessee College of Medicine, presents a comparative study of 1,710 infants, 961 of whom were given penicillin and 749 silver nitrate.

Twenty (2.1 per cent) of 961 infants exhibited pus in one or both eyes during or after receiving penicillin drops and 45 (6.0 per cent) of 749 exhibited pus after silver nitrate.

Abnormalities other than the presence of pus were noted in each group, states Dr. Franklin. Swelling of the eyelids was noted in 31 per cent of infants after penicillin application and in 58 per cent after silver nitrate. Redness of the delicate lining of the eyelids was seen in 42 per cent after penicillin and in 72 per cent after silver nitrate. Watery discharge was least frequent and occurred in two per cent after pencillin and in 10 per cent after silver nitrate.

Although the silver nitrate drop method is the most popular today, the physician points out that "silver nitrate is irritating to the extent of pus formation is confirmed by the fact that a high percentage of infants in the group receiving silver nitrate prophylaxis exhibited pus on the day of birth and the first day of life. Likewise a high percentage of those infants exhibiting other abnormalities at this time was probably due to this irritation." The author adds that "instances are recorded of infants being made blind by the use of a solution too high in concentration."

The author feels that the foregoing facts suggest that penicillin is in several respects superior to silver nitrate. "Penicillin in proper concentration is nonirritating," he states, "nonpainful, nondestructive and effective in the treatment of ophthalmia neonatorum [inflammation of the eyes in the newborn]."

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COMPLICATED SURGERY OF THE ABDOMEN WITH REFERENCE TO ANESTHESIA, DRAINAGE, PRE- AND POST-OPERATIVE CARE—WITH CASE REPORTS*

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In the outset I wish to thank the Programme Committee for the privilege of presenting this paper to our Society. The cases herein reported embrace only those having peritonitis of more than a regional scope, all of which were drained. It should be specifically mentioned that this series, consisting of 267 cases, were exceptionally ill patients. Our records show a mortality of 1.8 percent—that is a total of five cases.

In the more complicated cases—that is those who were seriously ill—it pays to make haste slowly. It is often the case that pre-operative supportive treatments are in keeping with the best interest of the patient, rather than immediate surgical intervention. For instance, intravenous glucose given with a sufficient amount of insulin to prevent even a transient increase in the blood sugar is always advantageous.

Patients frequently came into our hospitals with an acute abdomen (more especially during the War period, when there was a scarcity of civilian physicians) and in instances it was scarcely possible to make a conclusive diagnosis, regardless of the fact you can usually bet the appendix against the field. An immediate operation will not correct an already existing peritonitis; therefore, under pre-operative measures of a supportive nature, they usually become more favorable surgical risks, with a lesser tendency to bring surgery into disrepute. Furthermore, and more to the point, they have probably been vomiting and, as a result of lack of food intake, have developed acidosis with acetone and diacetic acid present in the urine. All such cases should be given glucose prior to operation.

In addition to a careful physical examination, complete laboratory investigations, including the Schilling blood count, reveal important complications that serve as a basis for the determination of the necessity of immediate surgical intervention or the deferment of same.

The selection of an anesthetic is an all important problem, whether it be drop ether, gas-oxygen and spray ether, sodium pentothal, spinal anesthesia, or what not, the latter serving remarkably well by producing excellent muscular relaxation; however, it is not adaptable in all cases, being contraindicated in respiratory and other conditions with which you are no doubt familiar. Due consideration must be given to body weight, not to the actual weight but to the ideal weight based upon heighth. Obese subjects, according to the literature, are poor subjects for spinal anesthesia, and it is from this anesthetic that fatality is most likely to result. Lower abdominal operations can be done painlessly under small dosage. In our hospital we have been using metycaine and thus far have not had a fatality from its use. A patient with a normal weight of 150 pounds should tolerate 150 milligrams, but can be operated on under 100 milligrams or less. Metycaine being lighter than spinal fluid, makes it important that patient be placed in the Trendelenburg position immediately after the spinal injection has been made and a careful check should be maintained on the blood pressure. By using small dosage we seldom encounter shock, nausea or a marked drop in the blood pressure, in which event it is readily restored by coramine, adrenalin chloride or obstetrical pituitrin.

Surgeons differ in their opinion regarding the choice of anesthetics and I have no argument to offer in that regard, for these problems are left largely to the judgment of the internist and anesthetist.

Drainage: We no longer resort to hard rubber tubing or glass, but rely on rubber tissue, which serves a useful purpose and is less likely to be complicated by secondary abscess or post-operative hernia.

It has long been known that in severe cases of peritonitis a reverse order of peristalsis establishes itself, as manifested by vomiting of cane juice fluid, a product of peritonitis, and, unless this is given prompt and proper consideration, these patients

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literally drown in their own secretion, therefore, the importance of suction drainage by means of the Wangensteen or similar apparatus, in conjunction with withholding food orally and providing intravenous nutrition, at the same time bearing in mind the importance of the modified Fowler position.

It is not my intention to discuss surgical technique; however, during the operative procedure in this type of cases, purulent fluids are evacuated from the intestinal coils, from the lumbar gutters and pelvis, preferably with a motor driven suction machine.

In peritonitis resulting from a ruptured appendix it is best to remove the appendix, if it is accessibly located, however, this is another of our problems, for, according to the best of my knowledge and belief, it is unwise to make deep explorations throughout a septic abdomen. In this connection, it is proper to quote a noted deceased surgeon, who had done more than 25,000 appendectomies, when asked: "Doctor what is the most simple major operation you ever did?" His reply was: "Well, I guess an appendix." He was then asked as to the most difficult operation within his experience and his instant reply was "Undoubtedly, an appendix." Summing up, I would say that much depends upon your good judgment, in various cases, as to the advisability of removing the appendix or not. Certain factors merit consideration, such as the severity of the illness; how is the patient doing under the anesthetic, and is the chance for recovery inhanced by drainage and removing the appendix at a subsequent time—after infection has subsided?

Prior to closing the incision, it is routine to dust the abdomen with sulfanilamide crystals. The Penrose drain is ordinarily removed on the third post-operative day; however, this depends upon the amount and character of the pus in conjunction with the infection with which we are dealing.

Post-operatively, these patients are sustained by giving daily, or twice daily, intravenous glucose with insulin in sufficient amount to prevent excess blood sugar. Suction is continued so long as vomiting persists or the stomach remains distended with fluids. Enemas, as a rule, are deferred in these cases by reason of paresis of the intestinal musculature, with cases bordering on paralytic ileus. A colon tube, well inserted, used with pitressin, usually relieves gaseous distention. Post-operative sedatives consist largely of pantopon, which is less deleterious than morphia and a suitable diet is resumed when indicated.

CASE REPORTS.

In order to conserve time, only four of 276 cases are reported.

Hospital Record No. 10,107: Patient was a 65 year old man, who had previously had a posterior gastro enterostomy in this Clinic and who, incidentally, was a diabetic. His original operation was on July 4, 1945. His recovery was uneventful. He was readmitted as an emergency at night on July 15, 1946, at which time he complained of acute abdominal pain with vomiting, temp. 102, tachycardia, leukocytosis, plus the usual findings of an acute abdomen, with a blood sugar of 200 milligrams per 100 c.c. of blood. He was operated on that night by Dr. J. M. Rogers of our Surgical Staff. The appendix was gangrenous and ruptured and was removed. Under appropriate treatment he made a satisfactory recovery and was discharged August 10, 1946.

Hospital Record, No. 10,649: This case is reported because it is rather unique. The history is briefly summarized as follows: Patient was a 71 year old man who had previously been hospitalized in a well standardized hospital in West Virginia, where he had remained for a considerable time. He had had an exploratory laparotomy and was then found to have a sub-phrenic abscess with partial gangrene of the gall bladder. The original lengthy incision, high right rectus, was closed and a lateral stab drain applied. Drainage continued for about five weeks, healing and reopening automatically. He was subsequently discharged from the hospital and returned to his home. He was admitted to Lee Memorial Hospital on the late afternoon of January 17, 1946, appearing desperately ill, with axillary temp. 104, pulse 138, in conjunction with much cardiac disturbance and persistent vomiting for 48 hours.

Laboratory reports were: W.B.C., 37,350; polys 98 per cent; immature cells 38 per cent. His urine showed acetone and diacetic acid, each 4 plus. He was definitely jaundiced, with a hugely distended sore abdomen with a flat percussion note.

Immediate Treatment: Intravenous, glucose, 1,000 c.c. 10 per cent, with insulin units, xx; penicillin, 60,000 units intra-muscularly, plus 40,000 units intra-venously with glucose.

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During the night he stopped vomiting and his nurse reported that he rested, reasonably well. His A. M. temp. was 97.2; pulse 80 per minute, intravenous glucose, penicillin and insulin were repeated that morning, and laparotomy done early that afternoon—January 18, 1946, under sodium pentothal grains xv.

Operative Findings: A large amount of free pus within the peritoneal cavity in conjunction with a tensely distended sub-phrenic abscess. Free pus was removed with suction machine and deeper abscess incised and drained of 600 c. c. of offensive smelling pus. Sulfanilamide was instilled into the abdomen and the wound drained with rubber tissue. Specimen of pus sent to Laboratory. Smears and cultures positive for streptococcus and colon bacillus. Penicillin was continued in maximum dosage and, as soon as streptomycin could be obtained, which was 8 days later, this was added to the treatment, giving 100,000 units every 3 hours. These drugs were continued for ten days, at the end of which time streptococcus was negative; however, colon bacillus was present, as revealed by both cultures and smears. Along about this time the Squibb's Research Laboratory reported that this type of colon bug was highly resistant to streptomycin, even in high concentration. He was then put on sulfathiazole orally and shortly thereafter drainage ceased and the sinus healed. On February 25, 1946, he was discharged in satisfactory condition. Our follow-up record indicates that he has gained 50 pounds in weight and is feeling normal in all respects.

Hospital Record No. 12,401: Patient—Miss P. B.— was a middle aged single lady, who was a member of the legal profession and pretty smart and did not reveal her age. She was admitted on August 18, 1946, complaining of severe abdominal pain of 24 hours duration, with persistent vomiting. Her temperature was 101.8; pulse 120, and her general examination was good—that is, there were no headaches, ear or mastoid disease and no goiter. Her circulatory, respiratory, genito-urinary and female generative organs were normal; however, there was marked abdominal distention with generalized soreness.

Laboratory Reports: W.B.C. 27,850; polys 97 per cent; immature cells 58 per cent.

Following admission we operated on her pretty promptly under gas-oxygen and spray ether.

The operative diagnosis was gangrenous perforative appendicitis with peritonitis and massive intestinal adhesions. The appendix was located in the left abdomen and was not removed. There was an abundance of thin purulent fluid within the abdomen and pelvis. The cavity was dusted with sulfanilamide crystals and the incision closed with a Penrose drain inserted deep in the pelvis. She made a satisfactory convalescence and was discharged on September 18, 1946.

Hospital Record No. 13,531: Patient was an 8 year old girl, admitted December 24, 1946, with abdominal pain and vomiting of more than two days duration. General examination, including laboratory investigations, indicated that she was severely sick. She had temperature elevation; W.B.C. 16,000 polys 90 per cent; immature cells 60 per cent, and in addition, presented typical symptoms of a severe peritonitis, with acetone and diacetic acid, 4 plus. Unfortunately, her mother had given her castor oil 24 hours previously, which intensified her pain. She was immediately given intravenous glucose, 500 c.c. 10 per cent, with insulin, units, x, and operated under ether anesthesia. Fortunately we were able to remove a gangrenous perforated appendix. Pus from the wound was positive for streptococcus; therefore, she was put on maximum doses of penicillin; given intravenous glucose with the proper amount of insulin, and nothing by mouth. Wangensteen suction was continued off and on for several days. Our pathologist, Dr. J. Hamilton Scherer, of Richmond, reported "Acute gangrenous appendicitis." It was necessary to maintain her periodically under the oxygen tent. She made a satisfactory recovery and was discharged January 18, 1947.

Lee Memorial Hospital.

DISCUSSION

DR. J. COLEMAN MOTLEY, Abingdon: I think after about forty years of work in the operating room most of us learn certain things by experience, and if experience has not taught us anything in that length of time it is quite obvious that we selected the wrong vocation some forty years before. I have often thought that if general practitioners who have been in practice for some four or five decades would get up when a paper of this sort is read and just tell what their experience has taught them it would be very informative and very helpful to some of the younger men.

I quite agree with Dr. Wright that the pre-operative treatment and the treatment while the operation is going

on and the post-operative care and surgical judgment as to when to operate are extremely important. I want to say just a word or two in discussing the operation itself, and my experience in the operating room has taught me that there are about five fairly essential things that go to make an abdominal operation safe for the patient.

In the first place, I think we should make a fairly accurate pre-operative diagnosis, so that we may design our incision so it will expose the organ on which we are going to operate. By that I mean, if a man has a ruptured spleen we should not try to operate on him through a low mid-line incision, and if he has a perforated ulcer we should not try to operate on him through a McBurney incision. I did that myself, and it did not work so well.

The second thing is to provide proper and adequate anesthesia, and particularly anesthesia that will give you complete abdominal relaxation.

The third thing is extremely gentle handling of the tissues. Do not shove and cuff the intestines around with metal retractors, because rough handling causes surgical shock and causes post-operative adhesions. That is tied in closely with number two—adequate anesthesia to give proper relaxation.

The fourth thing is perfect hemostasis. Leave a dry field when you are through operating.

The fifth thing is to limit the time of the operation to the safety limits of the patient who is being operated on. Sometimes we have to operate in cases of gastric resections or abdomino-perineal operations for cancer of the rectum that take more than an hour, but in the ordinary routine case we ought to do the operation and get the patient off the table in an hour. We sometimes have a hysterectomy and feel in the upper abdomen and find that the patient has a lot of gall-stones and are tempted to get the gall-stones out. But if you have used up the hour and used up the patient's stamina you had better let her keep her gall-stones for the time being.

So, to sum up, use a properly designed incision for the operation that is to be done, use proper and adequate anesthesia, handle the tissues gently, leave a dry field, and complete the operation within the time limit that is quite safe for the patient.

DR. A. M. SHOWALTER, Christiansburg: There are just a few things I should like to say about Dr. Wright's most enlightening paper. The first is a series of questions which in his discussion I should like for him to answer for my enlightenment.

Dr. Wright refers to the use of sulfanilamide inside the peritoneal cavity. First, I should like him to tell us just how much he uses and if he uses it dry. Or does he use any water with the powder, for more general distribution?

The second question, Dr. Wright, is whether or not you use pencillin regionally in your infected abdominal incisions. Third, do you use penicillin or sodium sulfathiazole or drugs of that type either intravenously or intramuscularly routinely in these infected cases? Those are the three questions.

The only comment I should like to make here is that it is my opinion, based on experience in the last year or so, that 5,000 or 10,000 units of penicillin used in the abdominal wounds, injected in the tissues with a needle, preferably after closing the skin, or a flushing out of the subcuticular tissues after the wound is tightly closed, will do more good in your infected cases than probably 1,000,000 units used intravenously or subcutaneously following your surgery. Recently I have had the pleasure of seeing the majority of my infected drainage appendix cases go out of the hospital in a week with clean wounds, after using sulfanilamide in the abdominal cavity and using penicillin in the wound. There has been a lot written about the use of penicillin, and I have been interested to see the results attained by the combined use of sulfanilamide in the peritoneal cavity and 5,000 or 10,000 units in the abdominal wall. The penicillin is dissolved in twenty to forty c.c. of sterile water.

DR. T. J. HUGHES, Roanoke: I think Dr. Wright's paper is a very timely one; and the discussion that has followed demonstrates the fact that in selecting papers to present before a body of this kind we often look for some obscure and complicated new procedure in some little-known disease, instead of selecting a practical subject which will be appreciated by a larger number of people.

There is no criticism which I care to make of Dr. Wright's paper. On the other hand, he is to be commended very highly for bringing to us a paper which is so full of interest and one which we appreciate from past experience.

So far as the anesthetic is concerned, we all have our pet anesthetics, and it has been our custom to try to fit the anesthetic to the patient. If it is going to be a short operation, we use sodium pentothal, or if we want more relaxation we use spinal anesthesia, but if we run against any snags or difficulties of any kind we usually drift back to the old, well-tried anesthesia with ether, or gas and ether.

As for drainage, that is a mooted question as to what kind of drainage or whether to use any drainage at all. Five or six years ago, when it became so popular to use the sulfa drugs in the abdominal cavity, I recall attending a surgical meeting in New York in which practically every surgeon present advocated the use of some form of the sulfa drugs in the peritoneal cavity. At that time it was very popular with a great many men to use just one very large dose of sulfanilamide or sulfathiazole in the peritoneal cavity and close the incision without drainage, and in the last five or six years I have followed that procedure very closely. I do not believe I have inserted a drain in the abdominal cavity a half-dozen times in that many years. I prefer sulfanilamide in the peritoneal cavity because it does not have a tendency to ball up and it is more easily and more readily absorbed. Sulfathiazole, I think it has been demonstrated, is not suitable on account of the fact it is deposited in balls and is not completely dissolved. I believe that the ad-

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dition of the penicillin, as suggested by Dr. Showalter, is a good thing—adding that in the incision following the insertion of the sulfanilamide in the peritoneal cavity.

As far as the time to operate is concerned, that is another question which is debatable. In my experience, I have always operated as soon as I could get ready after I had made a diagnosis of appendicitis, whether I thought it would rupture or not. I have had no reason to regret that procedure. As has been said, it is just a question of whether the surgeon thinks the patient is in a suitable condition to stand the operation or whether a delay would improve his condition.

I want to thank Dr. Wright for his excellent paper. I think it gives us all food for thought and consideration.

DR. M. B. HIDEN, Warrenton: The last speaker answered my question in part. What I have in mind is that we are avoiding or skipping the most controversial question and that is early operation *versus* late operation. Nobody has been able to make it perfectly clear to me when to operate early and when to operate late. It is certainly true that we have a positive pressure in the abdomen even in health and when there is present pus and an excess of gas in the abdomen that pressure is increased and pus under pressure is usually very toxic. By all means we should give supportive treatment.

In one of Dr. Wright's cases he gave supportive treatment for five days without operating and this patient was still getting absorption of toxic material from the pus. In a case of this kind I think something should be done to relieve or limit this absorption. After giving glucose, transfusions, etc., I believe a small rubber drain should be inserted, under local anesthesia to relieve at least temporarily the pressure from the pus and to stop to some extent the absorption of toxic material. A patient who is too sick to stand, under local anesthesia a puncture and insertion of a drain is probably too sick to be built up to stand an operation later. Personally I believe in an early operation, but if not an early operation you should, while building up your patient, insert a little novocain in the abdominal wall and put a drain of soft rubber tissue down into the abscess in the abdominal cavity and thereby relieve the patient of a great deal of absorption from the pus.

I should like for Dr. Wright to criticize that.

DR. WRIGHT, closing the discussion: I wish to thank these gentlemen, who have voluntarily participated in the discussion of this paper. They have given us something worth while to think about and I feel the Society as a whole has profited thereby.

In submitting this article the writer realizes that it is incomplete in various respects. Replying to Dr. Showalter regarding the intra-abdominal use of sulfanilamide, I wish to state that we use it intra-peritoneally in the crystalline form and in the medullary cavity of bones in solution, and that we use penicillin in the infected abdominal wall; also sub-cutaneously with gratifying results. I may say further that the dosage of sulfanilamide depends upon the age and weight of the patient, varying from 1.5 to 6 grams. In response to other questions, will say that we have never used sulfathiazole intra-peritoneally, but have used it frequently orally, especially in the presence of the colon bacillus infection, in which infection you cannot over-estimate the value of streptomycin, which we have given in 300,000 units every 3 hours. In abdominal abscesses and abscesses in general, we realize the importance of utilizing the laboratory promptly, for the early determination of the type of infection confronting us is a splendid index as to proper treatment.

Dr. Hiden propounded a very difficult question, "When to operate early and when to operate late?" and one which no surgeon can answer intelligently without first knowing the details regarding the specific condition of individual patients. This may best be explained by referring to *Hospital Record, No. 10,649*, in the instance of the 71-year-old man, and *Record No. 13,531*, an 8-year-old girl who was admitted December 24, 1946, with elevated temperature; vomiting for two days; an intensely sore abdomen, with leukocytosis, and acetone and diacetic acid, each 4 plus. As soon as her examinations were completed she was given intravenous glucose, 500 c.c. 10 per cent, with insulin, units x, which resulted in material improvement. She was operated on within 2 or 3 hours after admission, removing a gangrenous perforated appendix, which appendix, as usual, was sent to our pathologist, Dr. J. Hamilton Scherer, who reported "Acute gangrenous appendicitis". Operation revealed an enormous amount of thin pus and some fecal material within the cavity. She made a complete recovery; however, it was necessary to resort to Wangensteen suction, as well as oxygen and intravenous glucose repeatedly over a period of several days.

In order to conserve time, the writer purposely omitted from this treatise, a very much discussed question of the day, viz., early ambulation, and it was hoped that in as much as this came within the scope of the subject, under the heading of post-operative care, it would be brought out under discussion. The question of early ambulation is of paramount importance, and it seems proper to state that the writer has made considerable investigation through various competent sources and found a diversity of opinion in that connection. At our hospital we are getting the majority of our surgical cases out early and thus far have had no cause for regret.

In a reprint from the Department of Surgery of the Brooklyn Hospital, I find reported 27 cases of disruption of the abdominal wall, which, according to the writers, could not be attributed to faulty surgical technique or defective suture material, not to mention innumerable cases of post-operative hernias. We have done various cases of venous ligation where phlebitis developed, hoping to prevent complicating fatalities, and in consideration of end-results, this operation is advocated.

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THE TRENDELENBURG POSTURE IN THE THIRD STAGE OF LABOR*

EDWIN M. RUCKER, M.D.,
Richmond, Virginia.

In all studies of maternal mortality one notes with disquieting regularity the appearance of the three factors of sepsis, toxemia and hemorrhage. Chemotherapy has done much to lower the rate of sepsis, and better prenatal care through education has improved the incidence of toxemia; but hemorrhage remains little changed as a cause of mortality and secondarily as a major contribution to morbidity. There is no more fearsome thing in obstetrics than an unexpected postpartum hemorrhage of serious proportion.

I thought that a brief account of the current ideas concerning the mechanism of the separation of the placenta and the management of the third stage of labor in the light of these ideas might be of interest.

From the historical side it is interesting to note that prior to 1861 delivery of the placenta was effected either by traction on the cord or by passing the hand into the uterus and removing the placenta manually. In 1853 Crede described a technique of immediate expression of the placenta. The technique was a definite advance in the management of the third stage of labor; however, it seems that a similar technique had been in use at the Rotunda Hospital in Dublin for about a century previously and had been described by John Harvie in 1767.

Dohrn and Ahlfeld thought that the immediate expression of the placenta was attended by a greater loss of blood due to the imperfect separation of the placenta. They advocated an attitude of expectancy even though Ahlfeld stated that only 14 per cent of the placentas delivered spontaneously in his series. The ideal lies somewhere between the two.

In 1929 Morris Leff described the delivery of the placenta as occurring in 2 phases; the separation of the placenta which is a normal physiological process and takes place almost immediately after the delivery of the infant, and the delivery of the placenta which in most instances has to be aided by the attendant. He based his ideas on observations of 7500 personally conducted cases in which the separation of the placenta was determined by vaginal examination. It is his idea that the usually described signs of lengthening of the cord, changes in shape and position of the uterus, etc., are in reality not signs of separation but that the placenta is in the non-contractile portion of the uterus. There are no signs of separation of the placenta.

Danforth Graham and Ivy in a study of the functional anatomy of labor in the rhesus monkey found that the placenta begins to separate before the end of the second stage of labor and is soon complete following delivery of the fetus. This study was made upon frozen sections which were obtained by immersing the lightly anesthetized animals in a solution of ethyl alcohol and carbon dioxide in which the temperatures of –70 to –80 c. were attained and keeping the animal submerged for at least one hour. Their findings tend to confirm those of Leff mentioned above.

The technique which we are currently using in the management of the third stage of labor is based upon the concepts just outlined. Nothing new is claimed for this technique except for the use of the so-called Trendelenburg position during the repair stage.

Control of bleeding following the delivery of the placenta is effected by contraction of the myometrium. As is generally recognized general anesthesia impairs the contractility of the myometrium and for this reason we feel that the shorter the period of general anesthesia the less the chance of excessive bleeding. We use novocain pudendal nerve block which is given just before delivery of the baby and suffices for the repair. In this manner the general anesthetic can be stopped as soon as delivery of the head is imminent. In vertex presentations we use ergotrate (.2 mg.) intravenously just as the anterior shoulder is brought under the symphysis. Here again an attempt is being made to combat the effect of anesthesia and analgesia upon contractility of the myometrium. For you will recall that it is the contraction and change in shape and size of the uterus which is responsible for the separation of the placenta. As soon as the placenta is separated—and in most instances this oc-

*Read before the Manchester Medical Society, January 7, 1947.

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curs within one to three minutes—it is delivered. For some time we have determined the separation of the placenta by vaginal examination and our findings confirm the observations of Leff mentioned above.

For some years it has been noted that the amount of bleeding following delivery of the placenta was increased if the uterus was allowed to descend into and to remain in the pelvis. It had been our custom to have an attendant hold, but not massage the uterus during the stage of the perineal repair. For some months we have substituted the force of gravity for the attendant by placing the patient in the Trendelenburg, or head down, position, after the delivery of the placenta. This keeps the uterus out of the pelvis, and the stimulus of the attendant's hand upon the abdomen of a patient who is recovering from anesthesia is absent. We feel that this is a definite refinement and helps to keep blood loss at a minimum.

Prevalence of Acne Among Tuberculous Patients.

Pimpling and blotching of the skin, known as acne vulgaris, "is more often seen among tuberculous patients, and it persists longer among them than in those who do not suffer from a general infection," states A. W. Stillians, M.D., of Chicago.

Writing in the current issue of the *Archives of Dermatology and Syphilology,* published by the American Medical Association, the skin specialist says that he made a survey of the patients at the City of Chicago Municipal Tuberculosis Sanitarium to determine the prevalence of acne among them. Data on 400 female patients with active pulmonary disease reveals that the ages of greatest incidence of acne were 17 to 26 inclusive. Of 163 patients within these age limits 129 had acne, a percentage of 79.1.

"The decline in frequency after 26 was slow," according to Dr. Stillians. "Between the ages of 27 and 50, of 174 patients, 63 per cent still had acne, and among 10 patients between the ages of 51 and 60 there were four in whom the acne still persisted. Thus it appeared that the presence in the body of active tuberculosis not only increased the frequency of acne but greatly prolonged its course."

Dr. Stillians, Emeritus Professor of Dermatology at the Northwestern University School of Medicine, points to the striking effect which tuberculosis has on these patients by "the persistence of acne in the tuberculous patient beyond the age at which it commonly clears in the person who is not tuberculous."

The author cites another investigator who reported that in 3,215 tuberculous patients there were 1,092 cases of acne or 34 per cent. He agrees with this author's explanation as to why more instances of acne were found among convalescent than among very ill patients. The body contains migratory defense cells against infection which also form part of the body's connective tissue. This system of cells becomes exhausted in the extremely ill patients and therefore there is no reaction. When convalescence has begun, the system revives enough to reproduce the reaction in the skin that is called acne.

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PUBLIC HEALTH

L. J. ROPER, M. D.

State Health Commissioner of Virginia

The report of the Bureau of Communicable diseases of the State Department of Health for July, 1947, as compared with the same month in 1946, and for the period of January through July, 1947, compared with the same period in 1946, is as follows:

	July 1947	July 1946	Jan.-July 1947	Jan.-July 1946
Typhoid and Paratyphoid	11	20	53	58
Diarrhea and Dysentery	387	429	3,063	1,600
Measles	317	473	7,324	12,701
Scarlet Fever	25	70	845	2,022
Diphtheria	8	36	145	261
Poliomyelitis	10	14	28	23
Meningitis	8	9	72	159
Undulant Fever	14	5	44	33
Rocky Mountain Spotted Fever	20	20	40	49
Tularemia	2	4	33	38

COMBINED IMMUNIZATION

Mixed typhoid-paratyphoid vaccine has been in use over many years in the prevention of these enteric infections and it may be confidently accepted that satisfactory results have been achieved. Following this experience, and for biologic, economic and psychologic reasons, other combined immunizing agents have been developed and are available for use. Many physicians have introduced to their practice diphtheria-tetanus, diphtheria-pertussis and diphtheria-pertussis-tetanus vaccine with apparent satisfactory results. These and all other biologicals offered in interstate commerce are subject to certain standards set by the National Institute of Health. In this way most therapeutic and immunizing agents are tested for potency, sterility and toxicity.

The advantages of combined immunization are as follows:

1. The patient is more likely to complete necessary immunizations since a lesser number of visits and injections are made.

2. As with drug medication, a varying degree of synergistic action may occur, inducing higher levels of immunity against each disease.

3. Psychologically the important physician-patient relationship is frequently improved.

4. Economically valuable time and money are saved for all concerned.

Certain inherent disadvantages have also appeared:

1. The most appropriate immunization time may vary. For example, pertussin vaccine is now frequently advised at the age of two months or earlier, at which time most other immunizations are unnecessary and may be contraindicated.

2. Because of greater volume, concentration and combination of toxic materials, local and systemic reaction may be significantly greater.

3. More injections may be required for one disease than is allowed by the combination schedule. Two doses of diphtheria toxoid are recommended during the latter months of the first year, whereas military and some civilian authorities require three doses of tetanus toxoid.

The above objections are not of great significance usually, and to some extent may be overcome or are non-existent, and, as matters stand, combined immunization is considered worthy of further trial.

In conclusion, it is strongly advised that all children be vaccinated against smallpox during that age period between six and twelve months. This immunization may be advantageously given with the first or second injections of diphtheria, tetanus or combined toxoids, using the opposite arm. Through this technique secondary infections and complications are less likely to appear and the cosmetic result is more satisfactory.

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Presidents of the Medical Society of Virginia

PRESIDENT	YEAR OF MEETING
*Dr. James McClurg, Richmond	1821
*Dr. William Foushee, Richmond	1822
*Dr. William Foushee, Richmond	1823
*Dr. James Henderson, Richmond	1824
Meetings Discontinued.	
*Dr. Robert William Haxall, Richmond	1841
*Dr. Robert William Haxall, Richmond	1842
*Dr. Frederick Marx, Richmond	1843
*Dr. Thomas Nelson, Richmond	1844
*Dr. William A. Patteson, Richmond	1845
*Dr. William A. Patteson, Richmond	1846
*Dr. John A. Cunningham, Richmond	1847
*Dr. William A. Patteson, Richmond	1848
	1849
*Dr. Robert William Haxall, Richmond	1850
*Dr. Beverley R. Wellford, Fredericksburg	1851
*Dr. James Beale, Richmond	1852
*Dr. Thomas P. Atkinson, Danville	1853
*Dr. Carter P. Johnson, Richmond	1854
*Dr. H. C. Worsham, Dinwiddie	1855
*Dr. H. C. Worsham, Dinwiddie	1856
*Dr. James Bolton, Richmond	1857
*Dr. Levin S. Joynes, Richmond	1858
Meetings Discontinued	
*Dr. R. S. Payne, Lynchburg	1870
*Dr. R. S. Payne, Lynchburg	1871
*Dr. A. M. Fauntleroy, Staunton	1872
*Dr. Harvey Black, Blacksburg	1873
*Dr. A. G. Tebault, London Bridge	1874
*Dr. S. C. Gleaves, Wytheville	1875
*Dr. F. D. Cunningham, Richmond	1876
*Dr. J. L. Cabell, University	1877
*Dr. J. H. Claiborne, Petersburg	1878
*Dr. L. S. Joynes, Richmond	1879
*Dr. Henry Latham, Lynchburg	1880
*Dr. Hunter McGuire, Richmond	1881
*Dr. G. W. Semple, Hampton	1882
*Dr. W. D. Cooper, Morrisville	1883
*Dr. J. E. Chancellor, Charlottesville	1884
*Dr. S. K. Jackson, Norfolk	1885
*Dr. Rawley W. Martin, Chatham	1886
*Dr. Bedford Brown, Alexandria	1887
*Dr. Benjamin Blackford, Lynchburg	1888
*Dr. E. W. Row, Orange C. H.	1889
*Dr. Oscar Wiley, Salem	1890
*Dr. W. W. Parker, Richmond	1891
*Dr. H. Grey Latham, Lynchburg	1892
*Dr. Herbert M. Nash, Norfolk	1893
*Dr. Wm. P. McGuire, Winchester	1894
*Dr. Robt. J. Preston, Abingdon	1895
*Dr. Wm. L. Robinson, Danville	1896
*Dr. Geo. Ben Johnston, Richmond	1897
*Dr. Lewis E. Harvie, Danville	1898
*Dr. Jacob Michaux, Richmond	1899
*Dr. Hugh T. Nelson, Charlottesville	1900
*Dr. J. R. Gildersleeve, Tazewell	1901
*Dr. R. S. Martin, Stuart	1902
*Dr. J. N. Upshur, Richmond	1903
*Dr. Joseph A. Gale, Roanoke	1904
*Dr. Wm. S. Christian, Urbanna	1905
Dr. Lomax Gwathmey, Norfolk	1906
*Dr. Paul B. Barringer, Charlottesville	1907
*Dr. Wm. F. Drewry, Petersburg	1908
Dr. Stuart McGuire, Richmond	1909
*Dr. E. T. Brady, Abingdon	1910
*Dr. O. C. Wright, Jarratt	1911
*Dr. Hugh M. Taylor, Richmond	1912
*Dr. Southgate Leigh, Norfolk	1913
*Dr. Stephen Harnsberger, Catlett	1914
*Dr. Samuel Lile, Lynchburg	1915
*Dr. Joseph A. White, Richmond	1916
*Dr. Geo. A. Stover, South Boston	1917
*Dr. Ennion G. Williams, Richmond	1918†
*Dr. Ennion G. Williams, Richmond	1919
*Dr. Paulus A. Irving, Farmville	1920
*Dr. Alfred L. Gray, Richmond	1921
*Dr. E. C. S. Taliaferro, Norfolk	1922
*Dr. John Staige Davis, University	1923
*Dr. W. W. Chaffin, Pulaski	1924
Dr. Hunter H. McGuire, Winchester	1925
Dr. W. L. Harris, Norfolk	1926
*Dr. J. Shelton Horsley, Richmond	1927
*Dr. J. W. Preston, Roanoke	1928
Dr. J. Bolling Jones, Petersburg	1929
*Dr. Charles R. Grandy, Norfolk	1930
*Dr. J. Allison Hodges, Richmond	1931
Dr. I. C. Harrison, Danville	1932
*Dr. J. C. Flippin, University	1933
Dr. R. D. Bates, Newtown	1934
Dr. F. H. Smith, Abingdon	1935
Dr. P. St. L. Moncure, Norfolk	1936
Dr. J. M. Hutcheson, Richmond	1937
*Dr. G. F. Simpson, Purcellville	1938
Dr. A. F. Robertson, Jr., Staunton	1939
Dr. H. H. Trout, Roanoke	1940
Dr. W. B. Martin, Norfolk	1941
Dr. Roshier W. Miller, Richmond	1942
Dr. J. M. Emmett, Clifton Forge	1943
*Dr. C. B. Bowyer, Stonega	1944
Dr. H. B. Mulholland, Charlottesville	1945
Dr. Julian L. Rawls, Norfolk	1946
Dr. W. L. Powell, Roanoke	1947

*Deceased.

†Owing to influenza epidemic during World War I, the council met in 1918, and Dr. Williams was continued as President.

PROGRAM

(PRELIMINARY)

100TH MEETING

MEDICAL SOCIETY OF VIRGINIA

HOTEL ROANOKE, ROANOKE

OCTOBER 13, 14, and 15, 1947

Monday, October 13

9:00 A.M.

REGISTRATION

9:30 A.M.

COUNCIL—President's Parlor

11:00 A.M.

HOUSE OF DELEGATES—Parlor B

2:30 P.M.

SCIENTIFIC SESSIONS

Section A—Ballroom

THE PSYCHOSOMATIC EFFECTS OF CHRONIC ILLNESS—David C. Wilson, M.D., Charlottesville

This paper will make an effort to present the changes in personality which occur in persons who will have or have had chronic illness. There are two stages: first, there is the reaction of the personality to the diagnosis, and next there are the personality changes that are caused by being sick for a long time.

PRACTICE OF PSYCHOSOMATIC MEDICINE—John F. Williams, M.D., Richmond

Brief introduction. Recent advances. Selected case histories illustrating various problems of diagnosis and treatment. (*Lantern slides.*)

Discussion—R. C. Siersema, M.D., Richmond

USE OF VITAMIN E IN THE MENOPAUSE SYNDROME—Homer E. Ferguson, M.D., Richmond

A new era in the vitamin field has come forth in the use of Vitamin E in the treatment of menopausal patients. To date only a few persons have given the new therapy but this paper presents some of the findings noted in patients on such therapy and its effects on the menopausal syndrome.

Discussion—Howard R. Masters, M.D., Richmond

VARIED ALLERGIC REACTIONS TO PENICILLIN—James B. Black, Jr., M.D., J. Warrick Thomas, M.D., W. Randolph Graham, M.D., and DuPont Guerry, III, M.D., Richmond

A review of the literature of the various forms of penicillin allergy has been made. Suggestions are made for the handling of penicillin reactions. Precautions are outlined regarding prevention and therapy for the patient sensitive to penicillin. (*Lantern slides.*)

Discussion—Oscar Swineford, M.D., Charlottesville

ADVANTAGES OF INDIRECT SKIN TESTING FOR YOUNG ALLERGIC CHILDREN—W. Ambrose McGee, M.D., Richmond

Skin testing for infants and young children is not only more difficult than for adults but at times results in emotional upsets and prolonged fears. This great disadvantage can be offset and even improved upon by the indirect method of skin testing. In addition, this method makes available thorough allergic studies, in areas where physicians are not trained or equipped to handle allergic problems.

Discussion—Leta J. White, M.D., Petersburg

FALSE POSITIVE SEROLOGICAL TESTS—J. W. Love, M.D., Alexandria

This includes the recognition of increasing frequency of false positives, a classification of such tests in blood and spinal fluids, a clinical classification, and a discussion of these various disease groups. A conclusion in regard to the function of the attending syphilologist.

Discussion—E. E. Barksdale, M.D., Washington, D. C.
D. C. Smith, M.D., Charlottesville
R. D. Kimbrough, M.D., Richmond

Monday, 2:30 P.M.

Section B—Parlor B

RESULTS OF VAGOTOMY—Staige D. Blackford, M.D., and Alexander McCausland, M.D., Charlottesville.

The various treatments of peptic ulcer are briefly reviewed and the literature on vagotomy is brought up to date with a general appraisal of the problem. An analysis of fifteen cases subjected to vagotomy at the University of Virginia Hospital is briefly given.

Discussion—I. A. Bigger, M.D., Richmond

THE TREATMENT OF PEPTIC ULCER—Guy W. Horsley, M.D., Richmond

The modern treatment of gastric and duodenal ulcer is reviewed, considering both medical and surgical aspects.

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The indications for gastric vagotomy with its complications and end results are given.

Discussion—Robert Lee Payne, M.D., Norfolk

DIAGNOSIS AND TREATMENT OF DIVERTICULITIS OF THE COLON—Carrington Williams, M.D., and Carrington Williams, Jr., M.D., Richmond

This paper will discuss the incidences of diverticulosis and diverticulitis and will set forth the symptoms and signs which may lead to the diagnosis of the condition by x-ray examination of the colon. The medical and surgical treatment of the condition, and its complications will be discussed in some detail.

THE USE OF EARLY RISING AND EARLY AMBULATION FOLLOWING SURGICAL OPERATIONS—Herbert C. Lee, M.D., Richmond

The problem of when to get surgical patients out of bed following operations has long been a controversial subject. The recent vogue of early rising has shown how advantageous this practice is and on what sound physiologic principles it is based. There are definite contraindications to early rising and these points are discussed also. (*Lantern slides.*)

Discussion—C. Bruce Morton, M.D., Charlottesville
Ernest T. Trice, M.D., Richmond

ROENTGEN THERAPY OF BURSITIS—Fred M. Hodges, M.D., and Randal A. Boyer, M.D., Richmond

A review of three hundred cases of bursitis in various portions of the body is considered in the paper. Roentgen therapy is shown to be particularly valuable in the acute cases showing calcification. Relief of pain is often dramatic.

Discussion—J. L. Tabb, M.D., Richmond

THROMBOSIS OF THE DEEP VEINS OF THE LOWER EXTREMITY—Donald S. Daniel, M.D., Richmond

The greatest problem in surgery today is thrombosis of the lower extremities with subsequent pulmonary embolism. The etiology, pathology, and preventive treatment are to be discussed in hopes that this dreaded post-operative complication can be controlled.

Monday, 6:00 P.M.
Alumni Dinner—Medical College of Virginia

General Session
Monday, 8:00 P.M.
Ballroom

Call to Order—Frank A. Farmer, M.D., Chairman, Committee on Arrangements

Invocation

Announcements

Introduction of President

President's Address—William L. Powell, M.D., Roanoke

Memorial Hour—B. E. Harrell, M.D., Norfolk, Chairman, Membership Committee

1820—The Virginia Doctor and His Times—Wyndham B. Blanton, M.D., Richmond

Progress of Medicine in America in the Past One One Hundred Years—R. H. Shryock, Ph.D., Philadelphia

Public Relations—Henry S. Johnson, Director of Public Relations

100th Birthday Party

Tuesday, October 14
8:00 A.M.
Breakfast—Virginia Section, American Academy of General Practice

8:30 A.M.
House of Delegates—Parlor B

9:00 A.M.
Scientific Sessions
Section A—Ballroom

THE CLINICAL SIGNIFICANCE OF THE RH FACTOR—W. C. Winn, M.D., Richmond

All pregnant patients should have Rh typing done on the first pre-natal visit. Rh negative woman with Rh positive husband, however, can have uneventful pregnancies with normal healthy children. All Rh negative patients, especially women of all ages, should be transfused only with Rh negative blood. (*Lantern slides.*)

HEMOLYTIC ANEMIA IN THE NEWBORN—Edwin L. Kendig, Jr., M.D., Richmond

Thirty cases of hemolytic anemia in the newborn are reported. Causation and management of the condition are discussed. (*Lantern slides.*)

Discussion of Papers by Drs. Winn and Kendig—J. H. Scherer, M.D., Richmond

TETANUS NEONATORUM—John S. Weitzel, M.D., Richmond

Report of a case with recovery. During the 19th century and the first twenty-five years of the 20th century, tetanus neonatorum was an extremely frequent and usually fatal disease; today, it is, fortunately, a medical curiosity. Cook County Hospital reported only three cases in twenty years. (*Lantern slides.*)

Discussion—Lee E. Sutton, M.D., Richmond

FACTORS IN PREGNANCY AFFECTING THE NEW BORN—F. N. Mullen, Jr., M.D., Norfolk

A review of the literature on the effect of german measles and other diseases during pregnancy which have caused or thought to have caused congenital defects on infants. There will be reports of defects on congenital anomalies in the newborn of experimental animals exposed to x-rays during different ages of fetal life. Also the effect of the absence of certain vitamines in the diet in its relation to such defects.

Discussion—Lee E. Sutton, M.D., Richmond

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NUTRITIONAL MANAGEMENT OF THE NEPHROTIC SYNDROME—Lee E. Sutton, Jr., M.D., and Harry Y. Spence, M.D., Richmond

This report stresses the use of a supplementary high protein, high caloric feeding in the nephrotic patient. Certain considerations are to be given concerning the amino acid make up of the special supplement and relationship of nitrogen balance in the nephrotic child to dietary intakes.

Discussion—H. St. George Tucker, M.D., Richmond

INFANTILE ECZEMA IN GENERAL PRACTICE—Thomas W. Murrell, Jr., M.D., and Emily Gardner, M.D., Richmond

Infantile eczema will be discussed under the following headings: etiology; differential diagnoses; complications; dietary management; indications for allergic treatment and investigations; topical applications; internal medications; general care; prognosis; and education of the patients as to care and prognosis.

Discussion—J. Warrick Thomas, M.D., Richmond

Tuesday, 9:00 A.M.
Section B—Parlor B

TIC DOULOUREUX: REVIEW OF 200 CASES TREATED BY SURGERY—Claude C. Coleman, M.D., Charles E. Troland, M.D., and John M. Meredith, M.D., Richmond

Two hundred cases of tic douloureux that were treated by surgery are analyzed as to age, race, side and distribution of pain, and results. The differential diagnosis of trigeminal neuralgia is discussed and the operative treatment outlined. (*Lantern slides.*)

Discussion—R. Finley Gayle, M.D., Richmond

THE SIGNIFICANCE OF PARALYSIS OF THE LARYNX—Fletcher D. Woodward, M.D., Charlottesville

This paper covers the clinical aspects of the various types of paralyses and their causes and illustrates the surgical correction of the bilateral paralyses by *motion picture film and lantern slides.*

Discussion—C. T. Burton, M.D., Roanoke

THYROID SURGERY—John W. Devine, M.D., and John W. Devine, Jr., M.D., Lynchburg

This paper presents the diagnosis, pre- and post-operative care of thyroid disease, and our experience with Thiourea derivatives. The surgical technique of the thyroidectomy is illustrated with Kodachrome slides. Two hundred and thirty-two successive thyroidectomies are reported. (*Lantern slides.*)

Discussion—Hugh H. Trout, Jr., M.D., Roanoke

HEMORRHAGIC DISORDERS: DIAGNOSIS AND TREATMENT—Byrd S. Leavell, M.D., and Howard P. Holt, M.D., Charlottesville

A discussion of factors concerned in hemostasis and the present theories of blood congulation; our present concepts of each one of the hemorrhagic diseases with illustrated cases; primary and secondary thrombocytopenia and our present ideas regarding the cause of bleeding and thrombocytopenia; and factors responsible for deficient coagulating mechanism.

Discussion—Julian R. Beckwith, M.D., Clifton Forge

THE DIAGNOSIS AND TREATMENT OF NEUROSYPHILIS WITH NEGATIVE BLOOD AND SPINAL FLUID—James Asa Shield, M.D., Richmond

This paper presents a small series of cases and autopsy statistics. A very brief case report is made in each one of these cases, pointing out the therapy's being either malaria or malaria-penicillin combination. (*Lantern slides.*)

Discussion—Harry Brick, M.D., Richmond

12:00 Noon
Ballroom

Gastrointestinal Symptoms Occurring in Diseases Located Outside of the Gastrointestinal Tract—W. Halsey Barker, M.D., (*Guest*), Baltimore, Maryland.

Tuesday, 1:00 P.M.
Special Society Luncheons

2:30 P.M.
Ballroom

PROGRESS REPORT OF THE COOPERATIVE STUDY ON STREPTOMYCIN IN CLINICAL TUBERCULOSIS—William H. Harris, M.D., Richmond

The Richmond Veterans Administration Hospital is one of a group of cooperating hospitals pooling the resources of the National Research Council, American Trudeau Society, Army, Navy and the Veterans Administration in a study of the clinical use of streptomycin in tuberculosis. This paper presents the experiences of the entire group during the past year. (*Lantern slides.*)

Discussion—Wyatt E. Roye, M.D., Richmond

THE MANAGEMENT OF EARLY SYPHILIS—Dudley C. Smith, M.D., Charlottesville

The management of early syphilis is discussed from two aspects: (1) practical epidemiology and (2) present day therapy. (*Lantern slides.*)

Discussion—W. W. S. Butler, M.D., Roanoke

3:30 P.M.
Ballroom

Peripheral Diseases and Newer Concepts of their Management — Frederick A. Coller, M.D. (*Guest*), Ann Arbor, Michigan.

GOUT SIMULATING RHEUMATOIL ARTHRITIS—William A. Read, M.D., and Russell Buxton, M.D., Newport News

A case report including slides demonstrating the patient, biopsy specimens and x-ray changes. The importance of

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diagnosis and the pathological physiology of the joint changes are stressed. (*Lantern slides.*)

Discussion—Russell Buxton, M.D., Newport News

PREGNANCY AND DIABETES—William R. Jordan, M.D., Richmond

The present more frequent occurrence of pregnancy in diabetics justifies a discussion of this combination. The influence of pregnancy on the diabetes with the tendency to acidosis, low renal threshold, and marked changes in severity of diabetes before and after delivery will be emphasized. The high fetal mortality in spite of diabetic treatment is noted; and the result of studies of chorionic gonadotropin and the corrective treatment for the same and the change in fetal mortality rate will be described.

MEDICAL PRACTICE ON THE VIRGINIA PENINSULA SIXTY YEARS AGO—Chester D. Bradley, M.D., and Miriam D. Bradley, R.N., B.S., Newport News

The recently discovered Transactions of the Peninsula Medical Society, 1884-1893, which came to light among the books of the late Dr. Harry D. Howe of Hampton offer a most intimate glance into the medical life of the 1880's which was a glorious decade in the history of world medicine. Interesting facts are revealed from research growing out of the study of these Transactions.

Discussion—M. P. Rucker, M.D., Richmond

6:00 P.M.

End of Ballroom

President's Cocktail Party

7:00 P.M.

Ballroom

Banquet and Entertainment

Wednesday, October 15

9:00 A.M.

Ballroom

REVIEW OF 100 CASES OF CORONARY THROMBOSIS WITH MYOCARDIAL INFARCTION—Allen E. LeHew, M.D., and Julian R. Beckwith, M.D., Clifton Forge

A brief review of the literature, a tabulation of the symptoms and signs and clinical courses in all cases, mortality, and functional results.

Discussion—J. Edwin Wood, Jr., M.D., Charlottesville

THE ROLE OF AMMONIUM CHLORIDE AND OTHER ACID PRODUCING SUBSTANCES IN THE TREATMENT OF CONGESTIVE HEART FAILURE—A. J. Crutchfield, Jr., M.D., and J. Edwin Wood, Jr., M.D., Charlottesville

With observations made on several heart failure patients as a point of reference, we shall present: (1) A discussion of the intermittent versus and continuous administration of these substances; (2) The probable mechanism of diuresis with administration of these substances alone and the apparent explanation of the potentiation of xanthine and mercurial diuresis by concomitant administration of the acidifying substances; and (3) Indications, contraindications and dosage. (*Lantern slides.*)

Discussion—R. Earle Glendy, M.D., Roanoke

SOME ASPECTS OF THE RHEUMATIC PROBLEM IN SOUTHWEST VIRGINIA — R. Earle Glendy, M.D., Roanoke

This paper is to deal with the incidence of chronic rheumatic valvular disease in a series of patients with heart disease of all kinds and in all age groups. Certain points in the prophylaxis, diagnosis, prognosis, and treatment will be emphasized. (*Lantern slides.*)

Discussion—William M. Moir, M.D., Roanoke

THE HISTORY—AN IMPORTANT FACTOR IN DIAGNOSIS OF CORONARY THROMBOSIS—Ernest L. Copley, M.D., Richmond

This discusses the diagnosis of coronary thrombosis and evaluates the aids helpful in recognizing the condition. The importance of a clear history will be emphasized.

Discussion—Paul D. Camp, M.D., Richmond

TREATMENT OF BRONCHIAL ASTHMA — K. D. Graves, M.D., Roanoke

Prevention—avoiding exposure to offending substances: medication; physical measures—such as washed air, change of climate and administration of oxygen and helium; and prognosis. (*Lantern slides.*)

Discussion—Oscar Swineford, M.D., Charlottesville

THE PRACTICAL APPLICATION OF UNIPOLAR LEADS IN CLINICAL ELECTROCARDIOGRAPHY — Reno R. Porter, M.D., and Nathan Bloom, M.D., Richmond

Experience with unipolar leads has shown that these supplementary leads give additional information not furnished by the routine leads. In certain instances they are of particular value in determining the true status of the heart where the usual leads gave insufficient or equivocal data. (*Lantern slides.*)

Discussion—R. Earle Glendy, M.D., Roanoke

Prepaid Medical Care Plans—Frank E. Smith *(Guest)*, Director Associated Medical Care Plans, American Medical Association, Chicago.

Installation of Guy R. Fisher, M.D., as president.

Adjournment.

TECHNICAL EXHIBITS

Palm Room, Corridor and Railroad Room

	SPACE NUMBER
A. S. Aloe Company	3
Bilhuber-Knoll	19
The Borden Company	5
Camel Cigarettes	25-26
Ciba Pharmaceutical Products, Incorporated	16
Doak Company, Incorporated	4
The Doho Chemical Corporation	24
C. B. Fleet Company, Incorporated	22
General Electric X-Ray Corporation	28
Hoffman-LaRoche, Incorporated	15
Holland-Rantos Company, Incorporated	32
Lanteen Medical Laboratories, Incorporated	33
Lederle Laboratories, Incorporated	43
Liebel-Flarsheim Company	30-31
Eli Lilly and Company	2
J. B. Lippincott Company	29
Mead Johnson and Company	10-11
Meridian Electronic Equipment Company	21
Ortho Pharmaceutical Corporation	37
Parke, Davis and Company	6
Peoples Drug Stores	1
Philip Morris and Company	14
Powers and Anderson, Incorporated	12
William P. Poythress and Company, Incorporated	34
Reed and Carnrick	7
A. H. Robins Company	38
G. D. Searle and Company	39
Schering Corporation	18
Sharp and Dohme, Incorporated	17
E. R. Squibb and Sons	8
Smith, Kline and French Laboratories	40
Tablerock Laboratories	9
Valentine Meat-Juice Company	25
Van Pelt and Brown, Incorporated	20
U. S. Vitamin Corporation	23
White Laboratories, Incorporated	41
Winthrop Chemical Company, Incorporated	13
Zimmer Manufacturing Company	42

BOOK ANNOUNCEMENTS

The Pharmacopoeia of the United States of America. (The United States Pharmacopoeia). Thirteenth Edition. By Authority of the United States Pharmacopoeial Convention, meeting at Washington, D. C., May 14 and 15, 1940. Prepared by the Committee of Revisions and Published by the Board of Trustees. Official from April 1, 1947. Mack Publishing Company, Easton, Pennsylvania. 1947. cvii-957 pages. Cloth.

One of the most striking differences between this and previous editions of the Pharmacopoeia is the preference given to English titles. Latin titles are, of course, retained, but follow the English titles. The basic drug appears first, and the preparations follow, thereby permitting a grouping never before possible. Thus is found together digitalis, digitalis capsules, the injection, the powder, the tablets, the tincture, and then the purified glycocides digotoxin and digoxin. This plan enables the pharmacist and the physician to find in one place all available official forms of a drug.

Preference is given for metric doses and for quick reference as to metric-apothecary equivalents, a table printed in red, is reproduced inside the back cover.

Some 95 new substances have been added to this Thirteenth Revision, thereby maintaining it up to modern therapeutic requirements. In this list of new additions will be found: Aluminum Phosphate Gel, Benzyl Benzoate Lotion, Calamine Lotion, Digitoxin, Digoxin, Lanatoside C, Penicillin and its preparations, Sulfamerazine, Vinyl Ether, and many other important recent additions to our therapeutic armamentarium.

At a recent meeting of the Pan-American Sanitary Conference at Caracas, Venezuela, a resolution was passed unanimously urging all Central and South American countries, which do not have their own Pharmacopoeia to adopt the U.S.P. Prior to this action six of these countries (Cuba, Costa Rica, the Dominican Republic, Nicaragua, Panama, and Uruguay) had all taken that action. It has recently been announced that the Empire of Ethiopia has also adopted the U.S.P. This expanding popularization of the U. S. Pharmacopoeia indicates the increasingly important role that it is playing in the matter of drug standardization.

The physician will find much of practical interest and value within this last Revision of the Pharmacopoeia, and it is highly recommended that it become a part of his working library. It is unquestionably the best book of its kind in the world.

H. B. HAAG.

XUM

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—MRS. J. E. HAMNER, Petersburg
President-Elect—MRS. J. L. DECORMIS, Accomac
Recording Secretary—MRS. M. H. HARRIS, West Point
Corresponding Secretary,
MRS. MEADE EDMUNDS, Petersburg
Treasurer—MRS. REUBEN SIMMS, Richmond
Editorial Chairman—MRS. E. HOLLAND TROWER, Eastville

PROGRAM (Tentative)

Twenty-fifth Annual Meeting
Roanoke, Virginia October 14, 1947.
Headquarters—Hotel Roanoke

A most cordial invitation is extended to all women who are Auxiliary members or guests of physicians attending the Convention of the Medical Society of Virginia to participate in all social functions and attend the general session. Whether Auxiliary members or not, wives of doctors will be most welcome.

Registration Booth open Monday, October 13, from 5:00 P. M. to 8:00 P. M. and Tuesday, October 14, from 8:00 A. M. to 10:00 A. M.

Each woman is requested to register promptly upon arrival, either as delegate or visitor. (Registration fee—25 cents.)

Where there are no auxiliaries, the women are asked to become members-at-large and make this known to the registrar.

CHAIRMAN OF LOCAL ARRANGEMENTS:
Mrs. T. Allen Kirk, Roanoke.

Monday, October 13

5:00 P. M.—Registration Booth open until 8:00 P. M.

8:00 P.M.—Ball Room—General Session of the Medical Society of Virginia followed by Birthday Party.

Tuesday, October 14

8:00 A. M.—Registration Booth open until 10:00 A. M.

8:30 A. M.—Pre-Convention Board Meeting—Room 24, Hotel Roanoke.

All local presidents, presidents-elect (or vice-presidents where there is no president-elect), State officers and chairmen are expected to attend this meeting.

GENERAL ANNUAL MEETING

9:30 A. M.—Room 24, Hotel Roanoke.

Whether Auxiliary Members or not, wives of doctors will be most welcome.

Mrs. J. E. Hamner, President, presiding.

Invocation.

Address of Welcome.

Response.

Report of Committee on Arrangements.

Report of Committee on Registration and Credentials.

In Memoriam.

Minutes of the twenty-fourth Annual Convention.

Report of Post-Convention Board Meeting.

Report of Mid-winter Board Meeting.

Report of Pre-Convention Board Meeting.

Roll Call of Local Auxiliaries.

President's Message
Announcements.

Guest Speakers.

Report of officers and chairmen of standing committees.

Report of local presidents.

Report of Councilor to Woman's Auxiliary to Southern Medical Association.

Report of delegates to Annual Meeting of Woman's Auxiliary to American Medical Association.

Unfinished Business.

New Business.

Recommendations from the Board.

Reports:
Committee on Resolutions.
Nominating Committee.

Election of Officers.

Installation of Officers.

Presentation of Gavel.

LUNCHEON MEETING

1:30 P. M.—"Auxiliary Day" Luncheon (subscription). Honoring invited guests of the Society and the Auxiliary with their husbands and wives, honorary Auxiliary Members, the retiring and incoming presidents of the Medical Society of Virginia, and the Advisory Council and their wives.

Address—Dr. W. L. Powell, President, Medical Society of Virginia.

Inaugural Address of President—Mrs. J. L. DeCormis.

Guest Speakers:

President, Woman's Auxiliary, American Medical Association—Mrs. Eustace A. Allen, Atlanta, Georgia.

President, Woman's Auxiliary, Southern Medical Association—Mrs. Wiley R. Buffington, New Orleans, Louisiana.

Adjournment.

3:00 P. M.—Post-Convention Board Meeting.

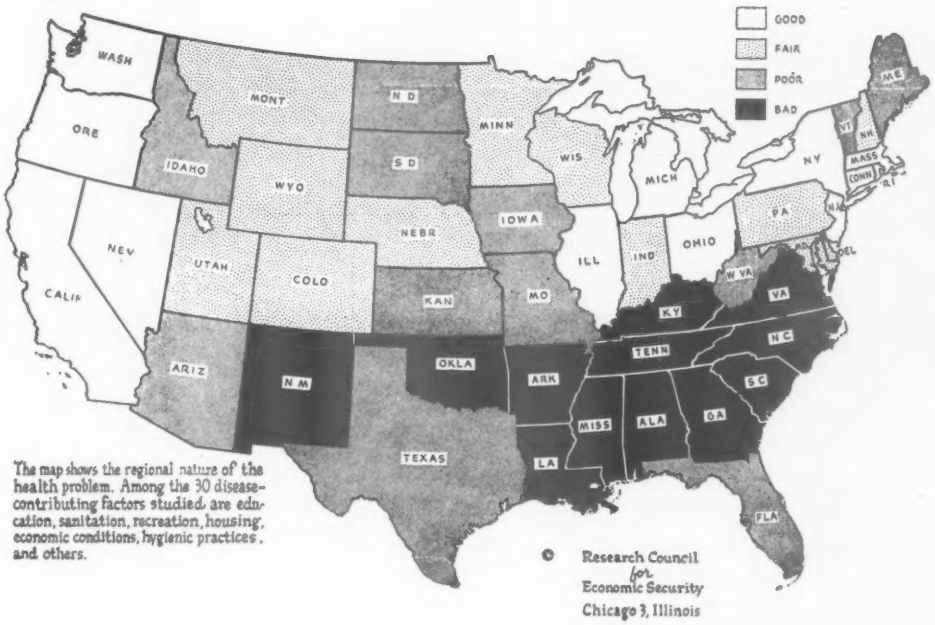
6:00 P. M.—Cocktail Party.

7:00 P.M.—Banquet and entertainment.

XUM

EDITORIALS

Our National Health Problem



The map shows the regional nature of the health problem. Among the 30 disease-contributing factors studied are education, sanitation, recreation, housing, economic conditions, hygienic practices, and others.

Economic Resources

IN the survey of the Research Council for Economic Security, Wealth per Capita in 1937, Income per Capita and Savings per Capita, are grouped together under economic resources. In this respect Virginia ranked 28th. In wealth her citizens averaged $2,144 against $2,335 for the country as a whole. The average income per capita was $450 against $575 and the average citizen had $101 in bank as compared with $156 for the entire United States. While wealth is no guarantee of good health, poverty is certainly an important factor in poor health. In the last analysis poverty is the one reason why the whole southern area except Texas and Florida is the black part of the map.

XUM

Dr. C. B. Bowyer

DR. CLAUDE BERNARD BOWYER, 87th president of the Medical Society of Virginia, died unexpectedly at his home in Stonega, Virginia, on July 29th. He was accorded all the honors befitting a first citizen. His body lay in state in the First Methodist Church in Appalachia, and was buried at Emory close to Bishop Waterhouse. The services were conducted by Dr. J. N. Hillman, ex-president of Emory and Henry, Dr. J. Foye Gibson, president of Emory and Henry, and his local pastor at Stonega.

Dr. Bowyer was a power in medicine and in the business and professional life of Southwest Virginia. He was a pioneer in industrial medicine and had much to do with framing Virginia's Workman's Compensation Law. He was a charter member of the College of Industrial Physicians and Surgeons of the American Medical Association.

Claude Bernard Bowyer was born on the campus of Emory and Henry College on Christmas Day, 1880. He graduated at Emory and Henry in 1902 and from the Medical College of Virginia in 1906. At the time of his death he was a member of the Executive Board of Trustees of the former and the Board of Visitors of the latter. He was an active and loyal member of the Medical Society of Virginia, organizing the component societies in Clinch Valley and Wise County. He served on the Council from 1918 to 1942. His presidency in 1943-44 was a memorable one in trying and difficult times.

"Neither the sun nor death can be looked at with a steady eye."

—LA ROCHEFOUCAULD

Edinburgh

EDINBURGH is so steeped in Medical history that even a casual visitor gets a taste of it. We were on our vacation with our mind set on other things than medical. Never-the-less, we could scarcely overlook the heroic bronze statue on Princes Street of Sir James Y. Simpson. After that we were obliged to look up the house in which he lived when he discovered the anesthetic property of chloroform. The chemist shop of David Walde, a discoverer of chloroform, in nearby Linlithgow, is marked by a bronze tablet. Walde, be it remembered, was the one who suggested to Professor Simpson that he try chloroform, when he was searching for an acceptable substitute for the inflammable and rather disagreeable ether. A book seller on Princes Street from whom we bought a map marked on the map the location of Simpson's House. It was on Queen Street between Frederick and Castle, just around the corner from the Sir Walter Scott House. We readily found the house for there is a brass plate on the door declaring to the world that this is the Simpson House and a tablet on the wall of the second story gave the story in more detail. Imagine our surprise when the next day our guide on a sight seeing tour pointed out a house on High Street, the Royal Mile, between the Castle and Holyroadhouse, and said that in that house Professor Simpson discovered chloroform, and repeated the familiar story of his wife finding him asleep under the dining table. He went on to say that he was professor of midwifery in the medical school and that a new building in the Royal Infirmary was erected as a memorial to him and that he is buried in the nearby Warriston cemetery.

But that was not all the medical stories our guide told. As we went down Lothian Road he pointed to a small round tower in St. Cuthbert's Church yard and told us that a watchman used to be stationed there to prevent grave robbing and when we had got-

ten around by Greyfriars Church yard he pointed to the iron fences around each grave, which he said were for the same purpose. He told us about the infamous "resurrectionists", Burke and Hare, who when grave robbing became too troublesome resorted to murder. They would lure unsuspecting strangers into a back room, murder them and turn the bodies over to the surgeons. "That is why they have such good surgeons in Scotland." When the resurrectionists were apprehended, Hare turned states evidence and Burke was hanged. His skeleton is preserved in the University, at least that is what the guide said.

Eclampsia

THE second day of the International Congress of Obstetricians and Gynecologists to celebrate the Bicentenary of the Rotunda Hospital, which was held at the Royal College of Surgeons in Ireland, was devoted to eclampsia. Professors of obstetrics from all over the world, Dublin, Edinburgh, New York, Boston, Calcutta, Cincinnati, Capetown, London, Melbourne, Brussels, Amsterdam, Leyden, Sydney, Montreal, Aberdeen, Rotterdam, Cambridge, Hong Kong, and Ayrshire, took part in the discussion. Stander, in a masterly manner, discussed the etiology. He grouped the many theories in three categories: (a) outside the body; (b) inside the body; and (c) in the genital tract. He discarded a and b and predicted that the cause of eclampsia would be found in the placenta, but that much more work would have to be done to substantiate the idea. On the other hand, Hofbauer declared very emphatically that he had discovered the cause of eclampsia; that it was due to acetycholine in the placenta which in some way, he did not make clear, acted on the adrenal cortex and the posterior pituitary and in that way produced the fits. Theobold said there was no acetycholine in the placenta, but that the spleen and liver contained a lot, if that mattered, and Browne of Montreal said the changes in the adrenals that Hofbauer described were found in normal pregnancy—and so the discussion went with no punches pulled.

Probably the most interesting part of the discussion concerned statistics during the war years, really mass experiments in dietetics. The death rate from eclampsia dropped tremendously during the war. In fact, as Theobold said, it was the first and only time that there had been a decline in deaths from toxemia in Great Britain and Wales. He attributed it to milk and vitamins issued to pregnant women and to the fact that they were rationed which meant that they took them. Theobold referred to King's statistics from China which showed that eclampsia was frequent when beri-beri was prevalent, but this did not hold true for Ceylon and Siam. Nevertheless he thought some unknown vitamin of the B group was an important factor in the causation or rather the prevention of eclampsia.

However, most of the discussion centered around treatment. Irving said that veratrum viridi had greatly improved his results at the Boston Lying-In Hospital. Others said they would be afraid to go back to veratrum viridi. The present master of the Rotunda had given up the Tweedy Method, which was the earliest conservative treatment, and was resorting to Caesarean section more frequently and O'Daniel Browne showed that the mortality at the Rotunda had risen since Tweedy's mastership. The great majority of the discussion advocated conservative treatment. Some stressed good nursing, some advocated bromether, some magnesium sulphate, and some morphine. It was repeatedly stated that the disease was self-limited, and if the fits could be stopped and the patient kept alive for thirty-six to forty-eight hours, she would recover. Many stressed the importance of oxygen. Lloyd of Cambridge reported on the use of curare.

XUM

A glucose intravenous drip was started and connected with it was a solution of pentothal and another of curare; when the patient began to twitch a little pentothal and a little curare were injected and the patient could not have a fit. Both of his patients recovered.

Professor Johnstone, the vice-chairman, summed up the discussion admirably and quoted from Omar Khayyam to the effect that we would go out by the same door by which we had come in, but that we would not go out empty handed, that when we had had time to digest what we had heard we would all profit by the discussion.

SOCIETIES

Virginia State Board of Medical Examiners.

At the meeting of the Board, June 18-21, 1947, the following were licensed to practice in Virginia:

THROUGH EXAMINATION

Dr. Robert Whitehead Alfriend, Norfolk.
Dr. Thomas Henry Alphin, Charlottesville.
Dr. Franklin Lynwood Angell, Richmond.
Dr. Robert Willoughbee Bradley, Sabot.
Dr. Carl Ashton Broaddus, Jr., Charlottesville.
Dr. William Knox Brown, Dallas, Tex.
Dr. Howard Olsen Burnette, Richmond.
Dr. John Abbott Byrd, Parksley.
Dr. Louis Herman Calisch, Charlottesville.
Dr. George Edward Calvert, Richmond.
Dr. Arthur Allen Carr, War, W. Va.
Dr. Charles Whitney Caulkins, Jr., Nashville, Tenn.
Dr. Edmond Madison Chitwood, Jr., Charlottesville.
Dr. David Alexander Christian, III, Appomattox.
Dr. George N. Chucker, Monterey.
Dr. Herbert Augustine Claiborne, Jr., Richmond.
Dr. Alize Cole, Richmond.
Dr. Claude C. Coleman, Jr., Richmond.
Dr. Wilford Anderson H. Councill, Jr., Baltimore, Md.
Dr. William Arthur Cover, Elkton.
Dr. Dorris Alvin Cunningham, Jonesville.
Dr. Waverley B. Dashiell, Norfolk.
Dr. Henry Chesley Decker, Richmond.
Dr. Powell Garland Dillard, Jr., Lynchburg.
Dr. Austin Ingram Dodson, Jr., Richmond.
Dr. Wayne Wilson Dutton, Chilhowie.
Dr. Norman Ende, Petersburg.
Dr. Nathaniel McGregor Ewell, Jr., Durham, N. C.
Dr. Richard Harding Fisher, Richmond.
Dr. Claiborne Willcox Fitchett, Norfolk.
Dr. William Patton Fite, Jr., Muskogee, Okla.
Dr. Harry Clifford Foster, Jr., Charlotte, N. C.
Dr. Milton David Friedenberg, Richmond.
Dr. Robert C. Green, Jr., Winchester.
Dr. David Jeremiah Greenberg, Richmond.
Dr. Matthew Hill Grimmett, Durham, N. C.
Dr. Stuart Leslie Haas, Brooklyn, N. Y.
Dr. Richard Littleton Haines, Catskill, N. Y.
Dr. James P. Harnsberger, Richmond.
Dr. Fleming Bates Harper, Richmond.
Dr. Seymour Elliott Harris, Richmond.
Dr. Waldo Cornell Henson, Jr., Charleston, W. Va.
Dr. Eugene Augustus Hildreth, Jr., Toledo, Ohio.
Dr. Douglass Orville Hill, Waynesboro.
Dr. John Edward Hill, Richmond.
Dr. Emory Falcon Hodges, Jr., Petersburg.
Dr. Thomas Martin Horsley, Kecoughtan.
Dr. Charles Edwin Horton, Vienna.
Dr. Catherine Ann Howard, Hampton.
Dr. Lawrence Max Howard, Lynchburg.
Dr. William Herbert Howell, Jr., Morgantown, W. Va.
Dr. Harry J. Hyer, Charlottesville.
Dr. Jerome Imburg, New Orleans, La.
Dr. Benjamin Lewis Jamison, Covington.
Dr. James Barrett Jones, Rochester, N. Y.
Dr. Kasper Kaufman, Petersburg.
Dr. Robert Daniel Keeling, Norfolk.
Dr. James Maurice Knopp, Staunton.
Dr. Henry Clayton Landon, III, Wilkesboro, N. C.
Dr. Gerald A. LoGrippo, New York City, N. Y.
Dr. William Andrew MacIlwaine, University.
Dr. John Jefferson Mahood, Bluefield, W. Va.
Dr. Robert Quarles Marston, Richmond.
Dr. Malcolm Bruce Martin, Richmond.
Dr. John Houston McClung, Lexington.
Dr. William West McClure, Richmond.
Dr. Charles Hymerick Meeks, Richmond.
Dr. Charles Theodore Michele, Philadelphia, Pa.
Dr. Joseph Walton Milam, Sutherlin.
Dr. Philip Lee Allen Minor, Richmond.
Dr. Eric Gaston Mitchell, Norfolk.
Dr. Walter Stephenson Newman, Jr., Blacksburg.
Dr. George Jeffries Oliver, Jr., Williamsburg.
Dr. Lloyd Lein Olsen, Richmond.
Dr. Harold Truman Osterud, Ashland.
Dr. Robert Edward Paine, Jr., Roanoke.
Dr. Rea Parker, Jr., Smithfield.
Dr. Francis Robert Payne, Jr., Richmond.
Dr. Edwin Pearlman, Norfolk.

Dr. Horace Eugene Perkins, Richmond.
Dr. Earl Raymond Peters, Richmond.
Dr. James Andrew Pettigrew, Ivanhoe.
Dr. James Wyatt Phillips, Richmond.
Dr. Forrest Williford Pitts, Richmond.
Dr. William Barrett Pope, Jr., Portsmouth.
Dr. Wilson Albert Powell, Jr., Norfolk.
Dr. William Wayne Quisenberry, Baltimore, Md.
Dr. Robert Ray Rector, Roanoke.
Dr. Ralph Sidney Riffenburg, Blacksburg.
Dr. Frank Marcellus Ripberger, Jr., Blackstone.
Dr. Nathaniel Lancaster Rodgers, Martinsburg, W. Va.
Dr. Jay Emmett Rogers, Jr., Charleston, W. Va.
Dr. Edward George Rosanelli, New York City, N. Y.
Dr. Edward Howard Scherr, Washington, D. C.
Dr. Joseph Alpheus Solomon, Arlington.
Dr. Benjamin Decatur Spencer, Charlotte, N. C.
Dr. Columbus Downing Tait, Jr., Chester.
Dr. John Sheffield Tennant, Newtonville, Mass.
Dr. Vincent Totim, Petersburg.
Dr. Ernest Randolph Trice, Seattle, Wash.
Dr. Asa Vicellio, Chatham.
Dr. Fred Walls, Jr., Cleveland, Ohio.
Dr. Clyde Hartwell Ward, Ann Arbor, Mich.
Dr. Benjamin Boisseau Weisiger, III, Richmond.
Dr. George Coriolanus West, Danville.
Dr. Enoch W. White, Jr., Jane Lew, W. Va.
Dr. Charles Warren Whitmore, Salem.
Dr. James Dwight Whitt, Gate City.
Dr. Jean Ann Wilfong, Richmond.
Dr. Morton Callowhill Wilhelm, Seattle, Wash.
Dr. Mortimer Lee Williams, Roanoke.
Dr. Harold Edward Wilkins, Aylett.
Dr. David C. Wilson, Jr., Syracuse, N. Y.
Dr. Alfred Yager, Englewood, N. J.
Dr. Walter Kinstler Yates, Kenova, W. Va.

THROUGH RECIPROCITY

Dr. John McLauchlin Adams, Winchester.
Dr. Edgar Baron, Kecoughtan.
Dr. Stephen Russell Bartlett, Jr., Richmond.
Dr. Harold Walter Bischoff, Falls Church.
Dr. James W. Bonds, Dante.
Dr. Alfred B. Brotman, Richmond.
Dr. John Robert Clark, Jr., Martinsville.
Dr. Daniel Lawrence Doherty, Jr., Roanoke.
Dr. William Nelson Eddy, Auburn, N. Y.
Dr. Harold Yishy Finck, Washington, D. C.
Dr. Charles O. Finne, Jr., Roanoke.
Dr. Walter Thomas Flaherty, Louisville, Ky.
Dr. John Franklin, Norfolk.
Dr. Landon Greene Gant, Alexandria.
Dr. Benjamin Golden, Washington, D. C.
Dr. Harold Jackson Gordon, Arlington.
Dr. Eugene Rudulph Grether, Alexandria.
Dr. Winston C. Hall, Ann Arbor, Mich.
Dr. William L. Harris, Falls Church.
Dr. Clarence R. Hartman, Falls Church.
Dr. Cecil Starke Hassell, Miami, Fla.
Dr. John Preston Jenkins, Richmond.
Dr. Amos Eldrich Johns, Remington.
Dr. Marvin Hayne Kendrick, New York, N. Y.
Dr. Anastasia Kraf, Winchester.
Dr. Persis Marti Kroutil, Alexandria.
Dr. Harry Buyer LaFavre, Virginia Beach.
Dr. Jack Louis Levine, Falls Church.
Dr. Sally Steele MacDonald, Washington, D. C.
Dr. Lewis Keith Madison, Warrenton.
Dr. John Phillip McGovern, Richmond.
Dr. George I. Meyer, Roanoke.
Dr. Robert J. Murphy, Jr., Roanoke.
Dr. John Oliver Nester, Arlington.
Dr. Ward E. Newcomer, Republic, Pa.
Dr. Ralph L. Nicholson, Arlington.
Dr. Harry Nushan, Hampton.
Dr. David Charles O'Brien, Portsmouth.
Dr. Merle Elmer Pickett, Roanoke.
Dr. Justin Plummer, Roanoke.
Dr. Roy R. Powell, Simons Island, Ga.
Dr. Paul Rawiszer, Wise.
Dr. Marvin Medford Satterfield, Roanoke.
Dr. George Arthur Shawkey, Charleston, W. Va.
Dr. John L. Shipley, Elizabeth City, N. C.
Dr. Arthur I. Sims, Arlington.
Dr. William Eidson Smith, Richmond.
Dr. Francis S. Springall, Gloucester.
Dr. Joseph William Still, Arcola.
Dr. Hugh Gregorie Stokes, Jr., Williamsburg.
Dr. Alden Wood Squires, Norfolk.
Dr. Walter Clark Tilden, Lancaster County.
Dr. Clarence J. Weimer, Philadelphia, Pa.
Dr. Ferdinand Welebir, Washington, D. C.
Dr. Ralph David Whitley, Washington, D. C.
Dr. Lorenz E. Zimmerman, Washington, D. C.
Dr. Francis T. Zinn, Norfolk.

The Virginia Society for Pathology and Laboratory Medicine

Held its semi-annual meeting at the University Hospital in Charlottesville on May 9, Dr. M. Beecroft, of Newport News presiding. The following were unanimously elected to membership: Dr. H. S. Breyfogle, Richmond; Dr. L. S. Kau, Winchester; Dr. J. D. Kernodle, Alexandria; Dr. J. R. Kriz, Richmond; Dr. T. J. Moran, Danville; Dr. P. S. Sahyoun, Richmond; Dr. G. Z. Williams, Richmond.

The meeting was attended by 34 members and guests and the following papers were presented:

Dr. T. J. Moran, Danville: Relapsing febrile nonsuppurative panniculitis (report of a case treated with penicillin).

XUM

Dr. A. A. Kirk, Richmond (by invitation): Three cases of thymic carcinoma.

Dr. H. S. Breyfogle, Richmond: The new law on post mortem examinations.

Dr. G. Z. Williams, Richmond: The application of the insurance principle to laboratory costs.

Dr. W. Grossmann, Charlottesville (by invitation): A case of congenital toxoplasmosis.

Dr. J. B. Cash, Charlottesville: A case of Kala Azar.

Dr. F. P. Parker and Dr. J. W. Eversole, Charlottesville: A case of disseminate torula infection with leukemia like blood picture.

Dr. M. L. Dreyfuss, Clifton Forge, is Secretary-treasurer.

The Smyth County Medical Society.

Held its monthly meeting on July 16, at the Grill at Hungry Mother State Park. Present were sixteen members and their ladies.

A committee was appointed, consisting of Dr. D. C. Boatwright, chairman, Dr. Willis Sprinkle and Dr. J. R. Blalock, to write a resolution on the death of Dr. J. M. Graybeal. It was suggested that a copy of this be sent to the Medical Society of Virginia for publication in the VIRGINIA MEDICAL MONTHLY.

Dr. J. M. Rogers gave a very interesting talk on the practice of medicine in Korea.

RESOLUTION

BE IT RESOLVED that the Smyth County Medical Society wishes to express to the family of Dr. J. M. Graybeal their deepest sympathy in their great loss.

That the Medical Society, Marion, and Smyth County have lost a valuable and sincere citizen who, while he spent his earlier years in the west, came back to Southwestern Virginia and settled down in the practice of eye, ear, nose, and throat.

That a copy of this resolution be made a part of the minutes of this meeting and be sent to the Medical Society of Virginia for publication in the VIRGINIA MEDICAL MONTHLY.

D. C. BOATWRIGHT
WILLIS SPRINKLE
J. R. BLALOCK
Committee

NEWS

100th Meeting, Medical Society of Virginia.

The Medical Society of Virginia, first organized the latter part of 1820, has lived with intermissions through several wars. This year in Roanoke will be held its 100th meeting, under the presidency of Dr. William L. Powell of that city. An interesting program has been arranged which includes papers on a variety of subjects, scientific and technical exhibits, and social features.

On Monday evening, October 13th, following the presidential address, Dr. Wyndham B. Blanton, one of the foremost historians of the Society, will talk on "1820—the Virginia Doctor and His Times." Dr. Richard H. Shryock, Philadelphia, a consulting editor of the *Journal of the History of Medicine and Allied Sciences*, will speak on "The Progress of American Medicine During the Past Century." Concluding the evening's program will be a birthday party.

Guests on Tuesday will be Dr. W. Halsey Barker, internist of Baltimore, and Dr. Frederick A. Coller, surgeon of Ann Arbor, Michigan. The Guest Speaker at the Wednesday morning session will be Frank E. Smith, Director of Associated Medical Care Plans of the American Medical Association.

The Medical College of Virginia Alumni Association will have its annual dinner meeting on Monday evening; special societies will have luncheon meetings on Tuesday as has been their custom; and a cocktail party, followed by a banquet and entertainment will be on Tuesday evening.

Mark the dates on your calendar now and plan to be in Roanoke, October 13, 14 and 15.

Post-Graduate Course in Ophthalmology and Otolaryngology.

The Virginia Society of Ophthalmology and Otolaryngology will hold its annual post-graduate course in the Baruch Auditorium, Medical College of Virginia, November 10, 11, 12 and 13.

The following physicians will speak by invitation: Dr. Harvey B. Haag, Medical College of Virginia; Dr. Harry P. Schenck, University of Pennsylvania; Dr. Chas. D. Blassingame, University of Tennessee; Dr. Francis E. LeJeune, Tulane University; Dr. Julius Lempert, Institute of Otology; and Dr. C.

Stewart Nash, University of Rochester. Also Dr. Alfred Cowan, University of Pennsylvania; Dr. Louis H. Clerf, Jefferson Medical College; Dr. Donald Lyle, University of Cincinnati; Dr. Walter S. Atkinson, New York, and Dr. Bruce Fralick, University of Michigan.

The first two days will be devoted to Otolaryngology and the last two days to Ophthalmology. Hotel reservations should be made through Mr. L. K. Baber, chairman of hotel arrangements, John Marshall Hotel, Richmond. For additional information, address E. Trible Gatewood, M.D., Professional Building, Richmond, Virginia.

Married.

Dr. Mason Smith and Miss Eudora Ramsay Richardson, both of Richmond, August 30th. He is a graduate in medicine of the University of Virginia in 1940 and has recently located in Richmond for practice after service in the Navy.

Mr. Tillman Miller Hepler, Christiansburg, and Miss Margaret Ellen Carter, Covington, June 26th. Mrs. Hepler is the daughter of Dr. Benjamin Lewis Carter.

Johnston Willis Hospital to enlarge.

This Richmond hospital is being enlarged to add 85 beds to its present capacity of 150. The addition will take in the present nurses' home, a four story structure, and an apartment house adjacent to the hospital property has been purchased for the nurses. Included in the new unit will be an operating pavilion, obstetrical department, and private rooms.

Mental Clinics to be Opened.

Dr. Joseph E. Barrett, State Commissioner of Mental Hygiene, has announced that seven mental hygiene clinics will be opened in Virginia with the aid of a federal grant. They will be located at Richmond, Newport News, Alexandria, Fairfax, Danville, Roanoke, and Lynchburg. These clinics will provide mental service to patients on furlough from State hospitals and will cooperate with social agencies, courts and physicians. All patients treated must be referred by physicians or agencies.

Dr. Maynard R. Emlaw,

Richmond, announces removal of his office to 211 West Grace Street, this city.

Medical Motion Pictures

Are available on a loan basis from the American Medical Association to medical societies, medical schools, hospitals and other scientific groups. Requests should be instituted as far in advance as possible, so that proper reservations may be made. Exact shipping addresses and dates should be given at time of request. Responsibility for the projection and care of the film must be borne by the individual or organization borrowing it. The Association does not have projectors available for loan. The borrower has to pay transportation charges both ways. The films include a number on anesthesia, physical medicine and a variety of subjects.

Requests should be sent to Secretary, Committee on Medical Motion Films, American Medical Association, 535 North Dearborn Street, Chicage 10, Illinois.

Dr. Arthur Klein,

Richmond, announces the opening of his new office at 1016 West Franklin Street, this city. His practice is limited to internal medicine.

Dr. C. G. Bennett,

After practicing for fifteen years in Tazewell County, has located in Martinsville, with offices in the Shackelford Building.

Instructional Course in Allergy

The American College of Allergists has announced that its annual Fall Graduate Instructional Course in Allergy will be given in Cincinnati, Ohio, November 3-8 inclusive, under the auspices of the Medical College of the University of Cincinnati.

The program this year is the best ever offered by the College. Forty-six formal lectures are listed and also a special allergy clinic of case presentations. An added feature this year will be three informal discussion groups which will be led by various members of the faculty.

The faculty is composed of more than forty outstanding physicians and scientists from prominent medical centers and colleges in the United States and Canada. The course presents a comprehensive study of the entire field of allergy—covering the fundamentals, special allergies, specific diseases, and all modern methods of treatment. Symposiums on dermatologic and pediatric allergy are also included, as

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well as a survey of the laboratory approach to the subject including preparation and standardization of extracts and skin testing.

The course is recommended to all those especially interested in allergy, and to the general practitioner and specialist who anticipates treating his own allergic patients.

Programs and complete information can be obtained by writing to the College Secretary, Dr. Fred W. Wittich, 423 La Salle Medical Building, Minneapolis 2, Minnesota.

Drs. Groseclose and Pearce.

Dr. Eugene S. Groseclose announces the association of Dr. Leroy S. Pearce in the practice of obstetrics and gynecology, with offices in Allied Arts Bldg., Lynchburg. Dr. Pearce recently completed a residency in this branch at the Medical College of Virginia Hospitals.

Annual Summer Clinics

The second session of the fifth annual summer clinics was held in Raiford Memorial Hospital on July 30th, with a large attendance. Dr. Charles M. Caravati, Director of Continuation Education of the Medical College of Virginia, discussed some medical aspects of Clinical Jaundice, and Dr. Harry Warthen, Associate Professor of Surgery, talked on Surgical Diseases of the Biliary Tract.

Many conditions of liver and gallbladder diseases were vividly illustrated by slides and x-ray views and there was a free discussion of all phases of the subjects presented. It was generally expressed by all present that this was one of the best meetings ever held in this institution.

The third and last session of the 1947 summer clinics were held on August 27. Dr. Waverly R. Payne of Newport News discussed Office Gynecology and Dr. Ernest T. Trice of Richmond, Early Ambulation of surgical and medical cases.

Seminar On the Progress of Physical Medicine.

The New York Polyclinic Medical School and Hospital, the pioneer postgraduate Medical institution in the United States, announces plans for a Seminar on the progress of Physical Medicine, on December 1st, 2nd and 3rd.

Members of the Faculty and invited guests will give talks and demonstrations on the progress in methods, clinical application, and in related fields, especially medical rehabilitation. The Seminar will be conducted by Dr. Richard Kovacs, Professor of Physical Medicine, and his staff. The preliminary program can be obtained by writing to the New York Polyclinic Medical School and Hospital, 345 West 50th Street, New York 19, N. Y.

Dr. Carol M. Rice

Has returned to Sweet Briar College, Sweet Briar, after having been with the Department of Student Health of the University of Wisconsin, Madison, for the past year.

Annual Spring Graduate Course.

The Gill Memorial Eye, Ear and Throat Hospital, Roanoke, announces the following guest speakers for its twenty-first annual Spring Graduate Course to be held April 5-10, 1948: Professor Adalbert Fuchs, Shanghai, China; Dr. Conrad Berens, New York City; Dr. A. D. Ruedermann, Detroit; Dr. Edwin B. Dunphy, Boston; Dr. Trygve Gundersen, Boston; Dr. John M. McLean, New York City; Dr. Alston Callahan, Birmingham; and Dr. Donald J. Lyles, Cincinnati.

Mid-Winter Meeting of House of Delegates of A. M. A.

Cleveland has been selected as the place for the mid-winter meeting of the House of Delegates of the American Medical Association. The dates are January 5th and 6th, and this will be followed by a general scientific session for the general practitioner on the 7th and 8th.

Dr. H. Bryan Hutt

Announces the opening of his offiice at 42 West Midlothian Boulevard, Youngstown, Ohio, with his practice limited to infants and children. He was formerly located in Alexandria and has been taking special work in Cleveland since his return from the Service.

Dr. William H. Kaufman,

Announces the opening of his office at 820 South Jefferson Street, Roanoke, for the practice of dermatology and syphilology. He was formerly resident and instructor in dermatology and syphilology at the University of Virginia Hospital. Dr. Kaufman

graduated from Duke University in 1937 and was in the Service from 1941 through 1945.

Resolutions Upon Retirement From Board of Medical Examiners of Drs. Boyd and Smith.

Again, at this time, it becomes our sad duty to say goodbye not only to two of our Board's most valued members, but also to two gentlemen, who in their official capacity for many years have been outstanding in the faithful and efficient performance of every duty and obligation placed upon them by the State of Virginia.

We are losing both our President, Dr. P. W. Boyd and Vice-President, Dr. F. H. Smith, and with them we lose much more than their guiding influence and their deep insight into the workings of the Board; we lose also their delightful friendship and the stimulation of their characters and personalities.

It is with the deepest appreciation of their memorable services on the State Board of Medical Examiners that we offer our felicitations and best wishes for the future.

We move that these resolutions be spread upon the minutes of the Board and a copy sent to the Virginia Medical Monthly for publication.

W. B. MCILWAINE, M.D.
R. D. BATES, M.D.
Committee.

Director, Division of Mouth Hygiene.

State Health Commissioner L. J. Roper announces that Dr. George A. Nevitt, of Louisville, Kentucky, will serve as director of the Division of Mouth Hygiene of the State Health Department, on loan from the U. S. Public Health Service, to fill the vacancy left by the death of Dr. N. Talley Ballou.

Dr. Nevitt has practiced in Louisville, and became dental director of the Kentucky health department in 1937. In the recent war he served for a time as dental consultant for UNRRA in Europe and the Middle East.

In announcing the appointment, Dr. Roper said plans are being made for more emphasis on dental hygiene, now that the wartime shortage of civilian dentists is lessening.

New Books

The following is a list of recent additions to the Library of the Medical College of Virginia, Richmond, which are available to our readers under usual library rules:

Advances in internal medicine. Vol. II.
Advances in pediatrics. Vol. II.
Amidon *et al*—Good food and nutrition.
Dejerine and Gauckler—The psychoneuroses and their treatment of psychotherapy.
Duncan—Diseases of metabolism. 2nd ed., 1947.
Ewerhardt—Therapeutic exercise.
Hall—Diseases transmitted from animal to man.
Hyman—An integrated practice of medicine. 5 vols.
Kugelmass—Clinical pediatrics. 1947 ed.
Moore—Penicillin in syphilis.
Samuels—Peripheral vascular diseases. 2nd ed., 1947.
Sherman—Foods: Their value and management.
Szent-Gyorgyi—Chemistry of muscular contraction.
Thompson—Yearbook of endocrinology, metabolism and nutrition.
Transactions of the American Association for the study of goiter—1942-1946.
University of Colorado—Rocky Mountain conference on infantile paralysis.
Wolf and Wolff—Human gastric function. 1947 ed.

Clinical Director, Eastern State Hospital.

Dr. Barrett, State Commissioner of Mental Hygiene and Hospitals, announces that Dr. Isaac C. East has joined the staff of Eastern State Hospital at Williamsburg as Clinical Director. Dr. East, a native of Mississippi, is a vetrean of World War II, and was formerly with the Department of Institutions of New Jersey, and has been connected with that States mental hygiene clinics and with its juvenile courts.

Wanted.

The State Department of Health needs a large number of *graduate* nurses, both white and colored, in various capacities, salaries for those in Public Health ranging from $2,160.00 to $3,033.60 a year, and those at Sanatoria from $1,764.00 to $3,242.40 with maintenance.

Practical and *Student* nurses and nurse *aides* are needed also.

For details, write the State Health Commissioner, Dr. L. J. Roper, State Office Building, Richmond 19. *(Adv.)*

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OBITUARIES

Dr. Claude Bernard Bowyer,

President of the Medical Society of Virginia for the year 1943-1944, died at his apartment in Stonega on July the 29th, aged 66 years. Although he had not been in good health for several months, his death was unexpected and was believed due to a heart attack. He graduated from the Medical College of Virginia in 1906 and shortly thereafter located at Stonega where he was connected with the Stonega Coke and Coal Company of which he soon became medical director, a position he held for a number of years. He had always taken an active part in the work of the Medical Society, serving for several terms as a councilor and on important committees. He was a member of the Board of Visitors of the Medical College of Virginia, member of the Board of Trustees of Emory and Henry College, a director of the First National Bank of Appalachia, one of the organizers of the Clinch Valley Medical Society, and also of the Lonesome Pine Country Club near Norton (and its president for the past fifteen years), and a leader in civic affairs of his section. His burial was near his old home at Emory.

Dr. Bowyer was unmarried but is survived by two sisters and two brothers, Dr. Thomas Bowyer of Baltimore and Dr. Clarence Bowyer of Chicago.

Dr. Walter Ashby Plecker,

Organizer and head of the Bureau of Vital Statistics of the State Health Department for thirty-four years, died August 2nd of injuries received when he was knocked down by an automobile. He was a native of Augusta County and eighty-six years of age. Dr. Plecker received his medical degree from the University of Maryland in 1885 and practiced as a country doctor for about twenty-five years. In 1912 he organized and became director of the State Bureau of Vital Statistics, a post which he held until his retirement last year. Dr. Pleecker had been a member of the Medical Society of Virginia for fifty-six years.

Dr. Tiffany Johns Williams,

Professor of obstetrics and gynecology at the University of Virginia, died August 19th following a heart attack. He was a native of Marylad and forty-nine years of age. Dr. Williams graduated from Johns Hopkins University Medical School in 1923 and, after practicing his specialty in several places, came to the University of Virginia from Great Falls, Montana, in the Fall of 1931. He had been an active member of the Medical Society of Virginia for the past fifteen years, having served as chairman and a member of the Committee on Maternal Health for a number of years, His wife and three three children survive him.

Dr. James Henry Ferguson,

Oldest practicing physician of Fairfax County, died at his home near Clifton on August 1st. He was eighty years of age and a graduate of the Medical College of Virginia in 1890. Dr. Ferguson practiced in the mountains of West Virginia until 1913 when he moved to Clifton. He had been a member of the Medical Society of Virginia for thirty-one years. Two sons and four daughters survive him.

Dr. Clyde Fenton Ross,

Well-known Richmond Urologist, died August 3rd. He was sixty-four years of age and graduated from the Medical College of Virginia in 1905. Dr. Ross served as Captain in the Medical Corps in World War I. He was professor of clinical urology and an associate clinical professor of dermatology and syphilology at the Medical College of Virginia, and was at one time venereal disease control officer for the City of Richmond. Dr. Ross had been a member of the Medical Society of Virginia for many years. His wife and a son survive him.

Dr. Algernon Stubblefield Vaiden

Died at his home in Monterey, August 1st, following a heart attack. He was sixty years of age and a graduate of the College of Medicine, University of Virginia, in 1911. Two daughters survive him.